DRAFT
ENVIRONMENTAL IMPACT EVALUATION

CONNECTICUT ENVIRONMENTAL POLICY ACT
(C.G.S. Sections 22a-1 through 22a-1h)

PROPOSED
HARTFORD CIVIC CENTER REDEVELOPMENT PROJECT

Sponsoring Agency:
STATE OF CONNECTICUT
DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

In Cooperation with:
CAPITAL CITY ECONOMIC DEVELOPMENT AUTHORITY

Prepared by:
FITZGERALD & HALLIDAY, INC.
Hartford, Connecticut

November 18, 2003

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
ADT	Average Daily Traffic
AST	Above-Ground Storage Tanks
CCEDA	Capital City Economic Development Authority
CEPA	Connecticut Environmental Policy Act
CEQ	Connecticut Council on Environmental Quality
CGS	Connecticut General Statutes
CHC	Connecticut Historical Commission
CL&P	Connecticut Light and Power
CNG	Connecticut Natural Gas
CO	Carbon Monoxide
ConnDOT	Connecticut Department of Transportation
CRCOG	Capitol Region Council of Governments
DEP	Connecticut Department of Environmental Protection
DPH	Connecticut Department of Public Health
DECD	Connecticut Department of Economic and Community Development
EIE	Environmental Impact Evaluation
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FTE	Full Time Equivalent
HCS	Highway Capacity Software
HCC	Hartford Civic Center
LBP	Lead-Based Paint
LOS	Level of Service
M	Million
MDC	Metropolitan District Commission
NAAQS	National Ambient Air Quality Standards
NIC	Northland Investment Corporation
NO_2	Nitrogen Dioxide
O^3	Ozone
OPM	State of Connecticut Office of Policy and Management
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
Pb	Lead
PCBs	Polychlorinated Biphenyls
PM_{10}	Particulate Matter (PM with a diameter of 10 microns or less)
$PM_{2.5}$	Particulate Matter (PM with a diameter of 2.5 microns or less)
PPM	Parts Per Million
RCSA	Regulations of Connecticut State Agencies
RSRs	Remediation Standards Regulations
SF	Square Feet
SHPO	State Historical Preservation Officer
SO_2	Sulfur Dioxide
STC	State Traffic Commission
UST	Underground Storage Tank

1 EXECUTIVE SUMMARY

Project Name: Hartford Civic Center Redevelopment

Date: November 18, 2003

Sponsoring Agency: Connecticut Department of Economic and Community Development

In Cooperation With: Capital City Economic Development Authority

Preparer: Fitzgerald & Halliday, Inc., 72 Cedar Street, Hartford, Connecticut 06106

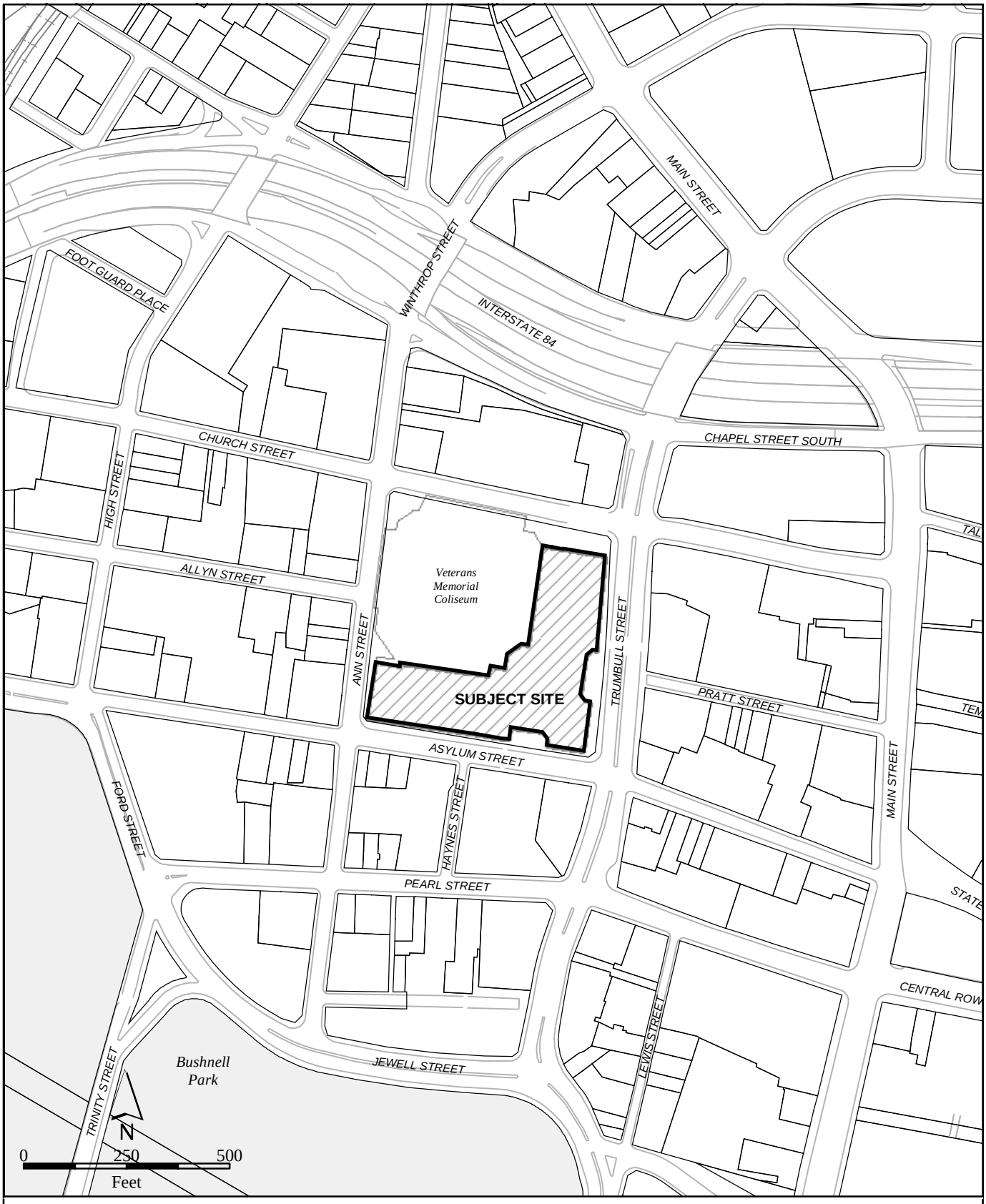
Description of the Proposed Action

The Connecticut Department of Economic and Community Development (DECD), in cooperation with the Capital City Economic Development Authority (CCEDA), is contributing state funds in support of a proposal by a private developer to redevelop a portion of the Hartford Civic Center (HCC) (Proposed Action). Since the DECD is contributing state funds for the Proposed Action, it is subject to the Connecticut Environmental Policy Act (CEPA) (Connecticut General Statues [CGS] Sections 22a-1 through 22a-1h, inclusive, and where applicable, CEPA regulations Sections 22a-1a-1 through 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies [RCSA]). Under current CEPA law, the subject document is considered an Environmental Impact Evaluation (EIE). The DECD is the CEPA Sponsoring Agency for this Proposed Action.

The HCC is located on approximately 11 acres at the intersection of Trumbull and Asylum Streets in downtown Hartford, Connecticut (Figure ES-1). The site is owned by Northland Two Pillars, LLC, and the developer of the project is Northland Investment Corporation (NIC). The Proposed Action will entail demolition of the existing HCC retail and office space and new construction of a mixed-use development called *Town Square* (see Figure ES-2; for detailed floor plans, see Appendix B). Construction of the Proposed Action will involve the four following components:

1. Renovation of the existing building systems along Trumbull Street. The exhibition space on the two lowest floors will remain. The existing building systems, interior walls, and finishes will be demolished. The structural steel frame of the existing building will be retained and reused. The exterior façade will be replaced and the interior space will be completely renovated.

2. The corner of the existing HCC at Trumbull and Asylum Streets will be demolished to just below bedrock to prepare for construction of retail space and a new residential tower. The portions of the existing parking garage that will need to be demolished will be rebuilt.



Draft Environmental Impact Evaluation

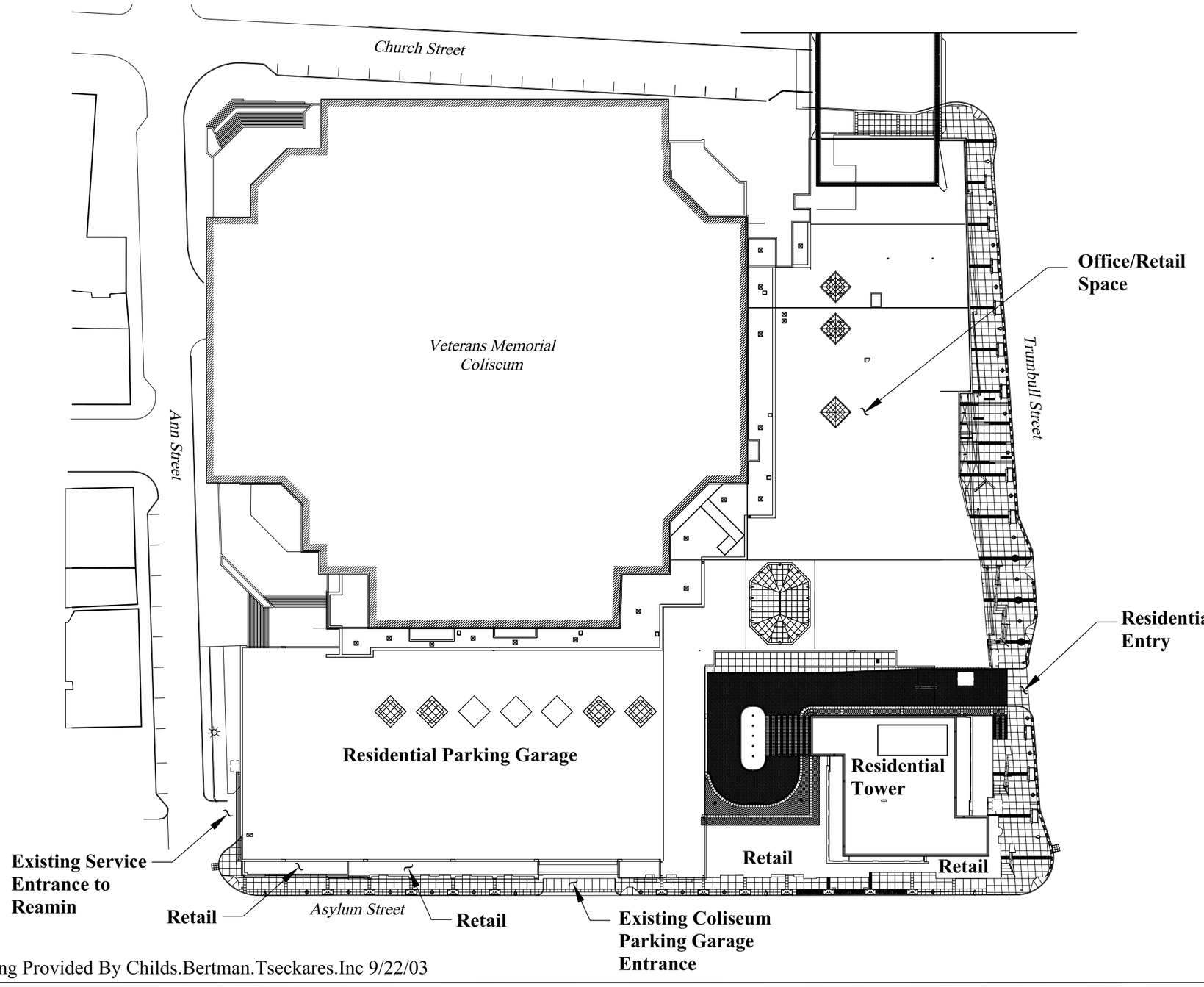
Hartford Civic Center Redevelopment Project

Hartford, Connecticut

November 18, 2003

PROJECT VICINITY & PROJECT SITE

Figure ES-1



Hartford Civic Center Redevelopment Project

Hartford, Connecticut

Draft Environmental Impact Evaluation

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PROPOSED SITE PLAN

Figure ES-2

Drawing Provided By Childs.Bertman.Tseckares.Inc 9/22/03

3. Renovation of the existing building systems along Asylum Street. The existing parking garage will remain. Additional parking will be constructed within the existing structure and above this. New ground-level retail space will be constructed, extending toward the street and terminating with a two-story retail anchor at the corner of Ann and Asylum Streets.

4. The two existing skywalks (pedestrian walkways) over Asylum and Trumbull Streets will be demolished. The existing skywalk over Church Street connecting to the Hilton Hotel will remain.

The new development will include:

- A residential tower with 262 luxury apartments comprising approximately 390,000 square feet (SF) of gross area, excluding mechanical and penthouse areas. The tower will be 36 stories in height and situated on the southeast corner of the site at Trumbull and Asylum Streets.

- Approximately 54,000 SF of retail space located at both ground level (fronting on the street) and on the second floor. The second floor may also house a sports club (33,000 SF). The space for the sports club may alternately be used as additional office space.

- Approximately 59,000 SF of office space located on the second and third floors.

- New parking garage providing 428 residential spaces to supplement the existing parking garage with 388 other/commercial spaces. There will be no internal connection between the two garages.

The existing Coliseum and related exhibition area will not be altered and is not part of the Proposed Action. The Coliseum is used for a variety of events ranging from sporting events, such as hockey and basketball, to concerts and the circus. The exhibition space is used for such activities as home shows, flower shows, and boat shows. Coliseum-related uses encompass 5,922 SF of space. This space will remain and will be integrated with the *Town Square* development via a series of pedestrian connections and new atrium of approximately 30,000 SF.

Purpose and Need

The purposes of the Proposed Action are three-fold:

1) To revitalize the aging and declining retail and office space functions at the HCC complex, thereby providing a positive economic generator for downtown Hartford (Downtown) in this location.

2) To meet the legislative mandate of CCEDA as specified in Chapter 588X of the Connecticut General Statutes, specifically, CGS Section 32-600(2)(C), which calls for "renovation and rejuvenation of the civic center and coliseum complex." One of the purposes for the creation of CCEDA was to "strengthen Hartford's role as the region's

major business and industry employment center and seat of government, [and] to encourage residential housing development in Downtown Hartford…" (CGS Section 32-602[a]).

3) To fulfill the economic development vision for the City of Hartford expressed in the March 1998 report to Governor Rowland by the special gubernatorial advisory group on economic development in Hartford. This report articulated a vision for the Downtown that states in part that "Downtown Hartford and its immediate environment should become a major regional, family-oriented arts, culture, education, sports, and entertainment center." To fulfill the vision, the advisory group identified Six Pillars of Progress -- six specific projects -- that included a *rejuvenated civic center*. These projects have been formally adopted by the State, through the establishment of CCEDA and its statutes, as the "catalytic centerpieces for growth" in Hartford, to serve as "foundations upon which to revitalize and redefine the Downtown area."

The need for the Proposed Action arises from the gradual and devastating economic decline in downtown Hartford over the past few decades. Specifically, by 2000, the HCC retail space was predominantly vacant. The existing HCC complex is now nearly 30 years old and unable to support and generate economic activity. The Proposed Action is needed to restore the viability and function of this property and to stimulate economic vitality in the Downtown core.

The 1985 City of Hartford Plan of Development laid out a strategy for urban renewal. One of the goals of the plan for Downtown vibrancy was to create a 24-hour a day city where people are actively engaged in both business and social activity in the evening as well as during typical office hours. Consequently, a need was identified to create a full range of housing options Downtown (affordable units to luxury units) to increase the residential population. The need for the Proposed Action therefore arises from shortage of housing choices as well as loss of retail activity.

Alternative Actions and Alternative Sites

The choice of an alternative action or location for the Proposed Action is not discretionary for either the DECD or CCEDA. The Proposed Action must conform to the purpose and intent of CGS Section 32-600(2)(C), which is to renovate and rejuvenate the existing HCC. Therefore, it was not feasible to consider alternative actions or sites for the Proposed Action.

Alternative Design Concepts

The CCEDA received and considered five (5) alternative design proposals for the redevelopment of the HCC. Evaluation criteria included the proposed mix of uses, financial viability, and compatibility with redevelopment goals for the Downtown. Financial viability was the primary concern, as a key purpose of the redevelopment is to produce a positive economic impact on Downtown Hartford. The Proposed Action was determined to be the most financially viable among the five proposals, and was selected for implementation and state financial support. Since any proposed commercial and/or residential reuse of the HCC would be confined to the same property and consist of similar elements, it can be anticipated that the potential environmental impacts and consistency with the State Plan of Conservation and Development would be

comparable among the range of alternative designs. Therefore, the four alternative design concepts that were not selected by CCEDA have been eliminated from further consideration for this EIE.

The No-Action Alternative

The No-Action Alternative would maintain the existing HCC's mix of uses and allow market forces to determine the occupancy of its retail and office space. This alternative was considered during the formulation of the revitalization strategy for Hartford; however, the decline in the retail component of the HCC led the special gubernatorial advisory group on economic development in Hartford to conclude that no action was not a preferred option. The lack of success of the HCC retail mall to date suggests that this alternative will not rejuvenate the complex as mandated by the Connecticut General Assembly. However, the potential impacts of the No-Action Alternative have been considered in comparison to the Proposed Action throughout this EIE.

Impacts and Mitigation

This subject document evaluates all potential or anticipated impacts associated with all of the phases of the Proposed Action. The implementation of the proposed action will have minor environmental impacts that can be mitigated. Expected adverse impacts include potential minor increases in traffic on local streets, displacement of some current HCC mall tenants, increases in solid waste and energy demand, and construction related impacts. Environmental benefits of the Proposed Action include the adaptive reuse of an existing building within an urban environment ("in-fill"), increased economic vitality in Downtown Hartford, enhanced pedestrian access, improved neighborhood cohesion, and additional housing choices. Anticipated impacts and corresponding mitigation measures for adverse impacts are summarized in Table ES-1. No mitigation is proposed in association with resources for which no adverse impacts were identified.

List of Potential Certificates, Permits, and Approvals

The following certificates, permits, and approvals are anticipated to be required from the Connecticut Department of Environmental Protection (DEP), Department of Public Health (DPH), and the City of Hartford for the Proposed Action:

- DEP - Discharge of Domestic Sewage Permit
- DEP - Discharge of Minor Non-Contact Cooling Water
- DEP - Discharge of Swimming Pool Wastewater
- DEP - Miscellaneous Discharges of Sewer Compatible Wastewater
- DEP - Wastewater Discharge
- DEP - Special Waste Authorization
- DEP - New Source Review
- DPH - Asbestos Abatement Notification
- City of Hartford - Building Demolition Permit
- City of Hartford - Fire Marshall Blasting Plan Approval

Table ES-1: Summary of Anticipated Impacts and Mitigation Measures for Proposed Action

Resource	Impact Synopsis	Mitigation
Land Acquisitions and Displacements	Displacement, temporary displacement, and/or relocation of 12 existing businesses in the HCC. Positive impact from net gain of 80,063 SF of mixed retail and office space. Construction Impacts: Temporary displacement of tenants.	• NIC will coordinate with existing retail occupants to mitigate the adverse effects of displacement.
Land Use and Zoning	No adverse impacts	None
Traffic and Parking	No adverse impacts from Proposed Action; however, LOS declines at 3 intersections under both No-Action and Proposed Action due to background growth. City of Hartford may adjust signal timing to improve traffic operations. Slight positive impacts on through improved amenities and beneficial impact to pedestrian access. Construction Impacts: temporary disruptions to traffic on local streets; temporary periodic closure of parking garage which will displace parkers using the existing HCC garage.	• NIC will develop and implement traffic and circulation management plan for the construction period. • NIC will coordinate with the City of Hartford to develop an alternative parking plan to assist users of the existing HCC garage to locate alternate parking during closures due to construction. • Recommend the City address traffic impacts.
Air Quality	No adverse impacts Construction Impacts: potential for localized air quality impacts due to prolonged use of diesel powered construction vehicles.	• Recommend natural gas based fuel for the new emergency generator, if practicable • Diesel powered non-road construction equipment with engine horsepower ratings of 60 or higher, that are on the project for 30 days or more, will be equipped with Retrofit Emission Control Devices and/or Clean Fuels (except for cranes) • Compliance monitoring of diesel powered equipment for air quality will be conducted and subject to an agreement between NIC and DECD • Construction equipment will be required to comply with all pertinent state and federal regulations relative to exhaust emission controls and safety
Noise	No adverse impacts Construction Impacts: Elevated noise levels associated with construction equipment and demolition/construction activities.	• Erection of temporary barriers around the work site where deemed effective. • Installation and maintenance of properly functioning muffler devices on all construction equipment. • Adherence to City of Hartford noise ordinances. • Test blasting will be used to ensure compliance with predicted vibration levels. • Each blast will be monitored for vibrations to ensure the project's vibration criteria. • Blasting will primarily be limited to occur between 9 AM to 5 PM Monday through Friday.
Socioeconomics, Demographics, Housing	Beneficial impacts	None

Table ES-1 Contd.

Resource	Impact Synopsis	Mitigation
Economy	Beneficial impacts relative to jobs, earnings, and output in long-term. Construction Impacts: Beneficial impacts due to construction-related jobs, earnings and output; potential minor adverse impacts on current tenants of HCC during construction and transition to new space.	• NIC will coordinate with existing retail occupants to mitigate the adverse effects of displacement
Water Quality	No adverse impacts	See Public Utilities and Services
Hydrology and Floodplains	No adverse impacts	None
Wetlands	No adverse impacts	None
Flora Fauna and Habitats	No adverse impacts	• NIC will provide a site and nesting box for the peregrine falcon in consultation with DEP
Soils and Geology	No adverse impacts	None
Historic and Archeological Resources	Minor visual impacts	• Coordination with SHPO to maximize compatibility of new buildings with surrounding National Register properties and districts.
Solid Waste/Hazardous Materials	Minor adverse impacts from increased solid waste generation. Construction Impacts: • Generation of approximately 5,000 tons of demolition debris from the demolition and renovation • Potential for release or discovery of hazardous materials during the demolition and renovation of existing facilities	• Solid waste management plan proposes practices to reduce solid waste generation. • Construction specifications will specify proper containment, transport, handling, and disposal of all wastes per state and federal laws. • Recommend testing and segregation of demolition debris into separate waste streams, including universal waste. • Abatement of ACM and LBP as necessary prior to demolition. All identified ACM will be treated as RACM; LBP will be tested for hazardous content and disposed of accordingly. • Sump area concrete surfaces will be tested for PCBs if they are to be demolished. If transformer room and/or sump area are demolished, all demolition waste with PCBs will be properly handled/disposed of. • Freon will be removed from air conditioning equipment and properly contained, labeled, transported, and disposed of prior to dismantling. • Recommend that soils excavated or recovered from drilled piers will be tested for contamination and managed accordingly. • Construction specifications will specify proper containment, transport, handling, and disposal of all wastes per state and federal laws.
Use of Toxic/Hazardous Materials	No adverse impacts	None
Aesthetics	Slight positive impacts	None

Table ES-1 Contd.

Resource	**Impact Synopsis**	**Mitigation**
Energy Use and Conservation	Minor increase in energy demand	• Design and completion of the Proposed Action will include a variety of new technologies in lighting, appliances and other items to conserve power.
Public Utilities and Services	No adverse impacts Construction Impacts: Potential utility disruptions during construction and potential erosion and sedimentation effects on stormwater runoff quality.	• All proposed connections to the existing water, sewer, and storm sewer system will be coordinated with the MDC prior to construction. • New interior parking garage drainage system will incorporate an oil/grit separator, which will discharge into the sanitary sewer system. • Relatively clean roof drainage will be segregated from the more polluted parking area drainage and discharged to the stormwater system. • Appropriate erosion and sedimentation controls will be incorporated into contract specifications and will be employed.
Public Health and Safety	No adverse impacts Construction Impacts: Slight potential to disturb and disperse rodents	• A rodent survey will be conducted and, if warranted, an extermination plan will be developed before demolition activities commence.

Coordination Process

The coordination process for this EIE has included a public scoping process and ongoing agency coordination. The DECD first initiated a Stage 1 Agency Project Review of the Proposed Action in July of 1999 to solicit early comments from various state agencies. As the project evolved, DECD implemented project scoping to further solicit comments from state agency reviewers and other interested parties. DECD then started the public scoping process under CEPA by issuing a Scoping Notice in Connecticut's *Environmental Monitor* on June 3, 2003 and conducting a Public Scoping Meeting on June 16, 2003 to further solicit comments from state agency reviewers and other interested parties. The Public Scoping Meeting was noticed in the *Environmental Monitor* on June 17, 2003 and in the *Hartford Courant* on June 18, 2003. A copy of the public scoping notices and responses received from the Stage 1 Agency Project Reviews and formal public scoping are included in Appendix A.

Conclusion

The Proposed Action will provide the benefits of a revitalized and economically viable development at the Hartford Civic Center site. The project is crucial to the success of the Six Pillars program, the overall revitalization strategy for Downtown Hartford, and the economy of the City of Hartford as a whole. Expected adverse impacts include potential minor increases in traffic on local streets, displacement of some current HCC mall tenants, increases in solid waste and energy demand, and construction related impacts. However, there are no outstanding significant impacts as a result of the Proposed Action, since impacts have been avoided and minimized through project design, and, where appropriate, will be mitigated through specific mitigation measures.

Review Period Comments

Review agencies and other interested parties are offered an opportunity to provide comments and other pertinent information that would help define environmental impacts, interpret the significance of such impacts, and evaluate alternatives.

Written comments on this document and any other pertinent information may be submitted to the below-listed agency contact by January 9, 2004 at 4:00 p.m. A public hearing on the proposed action will be held on December 18, 2003 at 6:00 p.m. at the Hartford Civic Center Mall, 225 Trumbull Street, Suite 100, Hartford, Connecticut. The submitted materials and responses, along with the EIE, will be attached to a Record of Decision that will be forwarded to the State Office of Policy and Management for a determination of its adequacy.

Agency Contact:

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Capitol Region Council of Governments
Connecticut Development Authority
Metropolitan District Commission
Hartford Environmental Justice Network

2 INTRODUCTION

2.1 DESCRIPTION OF PROPOSED ACTION

The Connecticut Department of Economic and Community Development (DECD), in cooperation with the Capital City Economic Development Authority (CCEDA), is contributing state funds in support of a proposal by a private developer to redevelop a portion of the Hartford Civic Center (HCC) (Proposed Action). Since the DECD is contributing state funds for the Proposed Action, it is subject to the Connecticut Environmental Policy Act (CEPA) (Connecticut General Statues [CGS] Sections 22a-1 through 22a-1h, inclusive, and where applicable, CEPA regulations Sections 22a-1a-1 through 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies [RCSA]). Under current CEPA law, the subject document is considered an Environmental Impact Evaluation (EIE). The DECD is the CEPA Sponsoring Agency for this Proposed Action.

The HCC, in downtown Hartford (Figure 1), is located on approximately 11 acres at the intersection of Trumbull and Asylum Streets (Figure 2). The existing HCC includes a mixed-use development with retail and office space, a parking garage, and the Veterans Memorial Coliseum (the Coliseum), an entertainment and exhibition arena. The retail/office space and parking garage occupy approximately four (4) acres that will be the site of the Proposed Action, while the existing entertainment complex will remain unchanged. The site is owned by Northland Two Pillars, LLC, and the developer of the project is Northland Investment Corporation (NIC). The Coliseum is owned by the Connecticut Development Authority.

The Proposed Action will generally entail demolition of the existing retail and office space and new construction of a mixed-use development called *Town Square* (see Figure 3; for detailed floor plans, see Appendix B). Construction of the Proposed Action will include the four following components:

1) Renovation of the subject site facing Trumbull Street. The exhibition space located on the two lowest floors will remain. The existing building systems, interior walls, and finishes will be demolished. The structural steel frame of the existing building will be retained and reused. The exterior façade will be replaced and the interior space will be completely renovated.

2) The corner of the existing HCC at Trumbull and Asylum Streets will be demolished to just below bedrock to prepare for construction of retail space and a new residential tower. The portions of the existing parking garage that will need to be demolished will be rebuilt.

3) Renovation of the subject site facing Asylum Street. The existing parking garage will remain. Additional parking will be constructed within the existing structure and above

Figure 1: Project Location

Figure 2: Project Vicinity and Project Site

Figure 3: Proposed Site Plan

this. New ground level retail space will be constructed, extending toward the street and terminating with a two-story retail anchor at the corner of Ann and Asylum Streets.

4) The two existing skywalks (pedestrian walkways) over Asylum and Trumbull Streets will be demolished. The existing skywalk over Church Street connecting to the Hilton Hotel will remain.

The new development will include:

- A residential tower with 262 luxury apartments comprising approximately 390,000 square feet (SF) of gross area, excluding mechanical and penthouse areas. The tower will be 36 stories in height and situated on the southeast corner of the site at Trumbull and Asylum Streets.

- Approximately 54,000 SF of retail space located at both ground level (fronting on the street) and on the second floor. The second floor may also house a sports club (approximately 33,000 SF). The space for the sports club may alternately be used as additional office space.

- Approximately 59,000 SF of office space located on the second and third floors.

- A new parking garage providing 428 residential spaces to supplement the existing 388 other/commercial spaces. There will be no internal connections between the garages.

The existing Coliseum and related exhibition area will not be altered and is not part of the Proposed Action. The Coliseum is used for a variety of events ranging from sporting events, such as hockey and basketball, to concerts and the circus. The exhibition space is used for such activities as home shows, flower shows, and boat shows. Coliseum-related uses encompass 5,922 SF of space. This space will remain and will be integrated with the *Town Square* development via a series of pedestrian connections and new atrium of approximately 30,000 SF.

2.2 PURPOSE AND NEED

2.2.1 Purpose

The purposes of the Proposed Action are three-fold:

1) To revitalize the aging and declining retail and office space functions at the HCC complex, thereby providing a positive economic generator for downtown Hartford (Downtown) in this location.

2) To meet the legislative mandate of CCEDA as specified in Chapter 588X of the Connecticut General Statutes, specifically, CGS Section 32-600(2)(C), which calls for "renovation and rejuvenation of the civic center and coliseum complex." One of the purposes for the creation of CCEDA was to "strengthen Hartford's role as the region's

major business and industry employment center and seat of government, [and] to encourage residential housing development in Downtown Hartford…" (CGS Section 32-602[a]).

3) To fulfill the economic development vision for the City of Hartford expressed in the March 1998 report to Governor Rowland by the special gubernatorial advisory group on economic development in Hartford. This report articulated a vision for the Downtown that states in part that "Downtown Hartford and its immediate environment should become a major regional, family-oriented arts, culture, education, sports, and entertainment center." To fulfill the vision, the advisory group identified Six Pillars of Progress -- six specific projects -- that included a *rejuvenated civic center*. These projects have been formally adopted by the State, through the establishment of CCEDA and its statutes, as the "catalytic centerpieces for growth" in Hartford, to serve as "foundations upon which to revitalize and redefine the Downtown area."

2.2.2 Need

The need for the Proposed Action arises from the gradual and devastating economic decline in downtown Hartford over the past few decades. Since Hartford's population peaked in the 1950s, there has been a steady decline in number of residents, partially resulting from the flight of middle-income populations to the suburbs. This was accompanied by growth in suburban retail locations, primarily malls. The Hartford Civic Center first opened in 1975, with retail space in the form of an enclosed mall intended, in part, to counteract this trend. Nonetheless, Downtown continued to experience decline in retail activity, and loss of retail occupants in the HCC space in particular. By 2000, this large retail space was predominantly vacant. The existing HCC complex is now nearly 30 years old and unable to support and generate economic activity. The Proposed Action is needed to restore the viability and function of this property and to stimulate economic vitality in the Downtown core.

The 1985 City of Hartford Plan of Development laid out a strategy for urban renewal including increasing jobs in the City, upgrading Hartford's labor force, and increasing the number of housing units to stimulate growth in residential population. One of the goals of the plan for Downtown vibrancy was to create a 24-hour a day city where people are actively engaged in both business and social activity in the evening as well as during typical office hours. Consequently, a need was identified to create a full range of housing options Downtown (affordable units to luxury units) to increase the residential population. The need for the Proposed Action therefore arises from shortage of housing choices as well as loss of retail activity.

2.3 ALTERNATIVES CONSIDERED

2.3.1 Alternative Actions and Alternative Sites

The choice of an alternative action or location for the Proposed Action is not discretionary for either the DECD or CCEDA. The Proposed Action must conform to the purpose and intent of CGS Section 32-600(2)(C), which is to renovate and rejuvenate the existing HCC. Therefore, it was not feasible to consider alternative actions or sites for the Proposed Action.

2.3.2 Alternative Design Concepts

The CCEDA received and considered five (5) alternative design proposals for the redevelopment of the HCC. Evaluation criteria included the proposed mix of uses, financial viability, and compatibility with redevelopment goals for the Downtown. Financial viability was the primary concern, as a key purpose of the redevelopment is to produce a positive economic impact on Downtown Hartford. The Proposed Action was determined to be the most financially viable among the five proposals, and was selected for implementation and state financial support. Since any proposed commercial and/or residential reuse of the HCC would be confined to the same property and consist of similar elements, it can be anticipated that the potential environmental impacts and consistency with the State Plan of Conservation and Development would be comparable among the range of alternative designs. Therefore, the four alternative design concepts that were not selected by CCEDA have been eliminated from further consideration for this EIE.

2.3.3 The No-Action Alternative

The No-Action Alternative would maintain the existing HCC's mix of uses and allow market forces to determine the occupancy of its retail and office space. This alternative was considered during the formulation of the revitalization strategy for Hartford; however, the decline in the retail component of the HCC led the special gubernatorial advisory group on economic development in Hartford to conclude that no action was not a preferred option. The lack of success of the HCC retail mall to date suggests that this alternative will not rejuvenate the complex as mandated by the Connecticut General Assembly. However, the potential impacts of the No-Action Alternative have been considered in comparison to the Proposed Action throughout this EIE.

2.4 BACKGROUND

The HCC first opened in 1975. The success of the retail space in terms of occupancy has fluctuated over the life of the HCC. Declines may have been due in part to reductions in activity level at the Coliseum, including the two-year closure from 1978 to 1980 due to the collapse of the roof and later, the loss of the Hartford Whalers professional hockey team. The Greenberg economic study for Downtown (Greenberg et al, 1998) suggested that the decline of the HCC retail space could be due to its orientation indoors, as an enclosed mall, versus having street front visibility to attract pedestrian traffic.

The concept of redeveloping the retail side of the HCC has been considered since 1997, when the special gubernatorial advisory group on economic development in Hartford was established. In March 1998, this group made a report to the Governor that identified the redevelopment of the HCC as one of the Six Pillars of Progress for the revitalization of Hartford. In December of the same year, the Hartford Downtown Council and the Connecticut Capitol Region Growth Council completed its report, *The Downtown Hartford Economic and Urban Design Action Strategy* (the Greenberg report). This study identified a set of actions to be implemented for Downtown Hartford revitalization. It included 21 projects primarily focused on expansion of housing, hotels, and cultural venues, and renovation of older, underutilized buildings. The underlying theme was

to seize upon opportunities to create greater cohesion in Downtown. The findings of this study supported the concept of redeveloping the HCC as a cohesive link in the business and residential fabric of Downtown.

The Connecticut General Assembly created CCEDA in 1998 to, among other things, stimulate new investment in Connecticut and encourage residential housing development in Downtown Hartford. CCEDA was charged with overseeing the implementation of the six "capitol city projects" (commonly referred to as the Six Pillars of Progress). The CCEDA board then issued a request for proposals for redevelopment of the HCC. Key criteria in considering the proposals were noted in Section 2.3.2, generally reflecting how the project would meet objectives outlined in the Greenberg report, including the goal of new Downtown housing. In April 2001, the proposal by NIC was accepted and endorsed by the CCEDA board. This proposal constitutes the Proposed Action that is the subject of this EIE.

3 EXISTING ENVIRONMENT AND IMPACT ANALYSIS

The following identifies existing conditions and potential impacts to natural, cultural, social, and economic resources in the project study area. The project study area is considered to include the existing city block that is the HCC site and the adjacent portion of Downtown Hartford within two city blocks of the Proposed Action. The potential impacts evaluated below include those from Proposed Action as compared to the No-Action Alternative.

3.1 LAND ACQUISITIONS AND DISPLACEMENTS

3.1.1 Existing Setting

The project site has 458,000 SF (+/-) of space (Hartford Assessor record to March 2003). This includes approximately 340,000 SF of retail, office, and pedestrian/atrium space and a 147,000 SF parking garage. As of August 2003, approximately 20 percent of the retail and office space was occupied (about 66,000 SF). The retail, office, and pedestrian/atrium space form an enclosed shopping mall. There are 12 existing businesses, including one fast-food restaurant, nine retail stores, and two automated teller machine (ATM) outlets. There are also offices for two non-profit agencies. The project site abuts the Coliseum, an entertainment space with an arena and exhibition hall.

The HCC property is bounded by Trumbull, Ann, Church, and Asylum Streets. Adjacent properties are therefore physically separated by these streets. Adjacent properties support a mix of commercial, service, office, institutional, and parking uses common to urban downtowns (see Figure 4). The retail and restaurant uses are generally located on the ground/street level in surrounding buildings, while office complexes tend to occupy upper stories. Institutional uses include a church and a magnet public high school.

3.1.2 Direct and Indirect Impacts

The No-Action Alternative would not require the displacement and/or relocation of any residences or businesses. However, the ongoing decline of economic vitality in the existing Civic Center Mall can be anticipated to have an adverse effect on the future viability of current occupants, which may result in their displacement or business closure over time.

The Proposed Action will require the displacement, acquisition, and/or relocation of the 12 existing businesses and two non-profit agencies in the HCC. The businesses and offices to be displaced occupy approximately 66,000 SF of space. The Proposed Action offers 54,135 SF of retail space and 91,928 SF of office/flex space (including the potential sports club). At full occupancy, the Proposed Action would offer a net gain of 80,063 SF of mixed office and retail space over current conditions.

Figure 4: Land Use

No other businesses will be directly impacted by the Proposed Action. In addition, there will be no direct impact to any residences as a result of the Proposed Action. There will also be no indirect impacts to any businesses or residences in terms of displacements or acquisitions as a result of the Proposed Action. However, it is anticipated that some of the existing retail businesses may remain as part of the *Town Square* development and will be temporarily displaced during the construction period.

3.1.3 Cumulative Impacts

There will be no cumulative impacts in terms of displacements and acquisitions as a result of either the No-Action Alternative or the Proposed Action.

3.1.4 Mitigation

The CCEDA, the HCC's former property owner (Aetna, Inc.), and NIC have been working with existing retail occupants in the HCC over the past several years to assist with relocation or to negotiate acquisition of businesses. NIC will continue this practice to mitigate the adverse effects of displacement of the current HCC retail occupants.

3.2 LAND USE, ZONING, AND LOCAL AND REGIONAL DEVELOPMENT PLANS

3.2.1 Existing Setting

Land Use

The project site is a mixed-use facility with an enclosed mall comprised of retail, restaurant, and some office space. It also includes an addition of 388 spaces to the existing parking garage. The enclosed mall is currently about 20 percent occupied, with one fast-food restaurant, nine retail stores, two bank ATM outlets, and two non-profit agency offices. It occupies the same block as the Coliseum, an entertainment venue with arena and exhibition space.

The surrounding land use pattern is a mix common to urban communities. The adjacent blocks include street-level retail, personal services such as hair salons and restaurants, and several surface parking lots. Many buildings are multi-storied and house office complexes on the upper floors, including medical, law, financial services, and insurance industry offices. There is a church on the corner of Church and Ann Streets, and the Sports Sciences Magnet Public High School occupies the southwest corner of Asylum and Ann Streets. Along with the HCC, these uses form a key segment of Hartford's Downtown. Existing land use in the immediate project vicinity is shown in Figure 4.

Zoning

The HCC falls within the B-1 zoning classification for the City of Hartford. This is the Downtown Development District Zone, which has the stated purpose to promote the long-term economic growth of the Downtown by encouraging development compatible with the

character of the Downtown. Additional goals include fostering expansion of commercial office space, expanding employment opportunities, and improving pedestrian and vehicular circulation and parking management. Uses permitted in this zone include all of those that will be part of the Proposed Action, including multifamily dwellings, business and personal services, most retail trades, and parking.

NIC has received the following zoning approvals from the City of Hartford for the proposed *Town Square* project:

- Formal Preliminary Site Plan Approval (February 25, 2002)
- Grant of Variance from parking requirements in relation to minimum loading space dimensions and requirements of an attendant for tandem parking spaces (June 18, 2002)
- Final Formal Site Plan Approval (February 24, 2003)
- Grant of Variance from parking requirements to allow an increase in the number of non-attendant tandem parking spaces (June 12, 2003)

Local and Regional Development Plans

The project study area falls within the planning region addressed by *Hartford Plan of Development 1985-2000* (Commission on the City Plan, 1986) and by the *Connecticut Capitol Region Plan of Conservation and Development* (Capitol Region Council of Governments [CRCOG], 2003). These plans each articulate a vision, goals, and objectives for future land use and overall development within their respective planning regions. Key relevant findings of these reports are summarized below.

Hartford Plan of Development 1985-2000 (the Plan): The Plan for the City of Hartford has five components including housing, economics and employment, infrastructure and open space, transportation, and land use. Major relevant issues identified within these five components include:

- Housing availability – maintaining existing housing stock, providing programs in support of low-income housing, and retaining and attracting middle and high income populations to live in the City
- Neighborhood stability – supporting revitalization and preservation of neighborhoods
- Efficient use of land – promoting infill development and effective redevelopment/adaptive reuse of properties
- Mobility and traffic – alleviating and preventing congestion and providing parking
- Minimize tax burden – reducing high tax rates for City residences and businesses
- Promoting the City
- Safe environment – improving water quality in the Connecticut River, minimizing air pollution, safely handling hazardous waste storage and disposal, and reducing visual blight

In response to these issues, the Plan calls for the following strategies for the Downtown:

- High density mixed uses
- Expansion of tourism, convention, and entertainment
- Developing short term parking for retail, promote use of transit, and improved pedestrian amenities
- Developing housing in concert with office growth.

The Downtown Neighborhood, which includes the HCC, is identified as a strategic development area where intense development is desirable and there is a high potential for a mix of various land uses. While the Plan states that it is intended to serve as the impetus for the preparation of individual neighborhood plans, no separate plan for the Downtown Neighborhood has thus far been developed.

Connecticut Capitol Region Plan of Conservation and Development (the CRCOG Plan): This plan establishes a future land use policy for the Capitol Region. Connecticut's Capitol Region encompasses the City of Hartford and 28 surrounding suburban and rural communities. The CRCOG Plan recommends a future development pattern guided by six major themes:

1. Focus new regional development in areas in which existing and planned infrastructure can support that development

2. Support efforts to strengthen and revitalize Hartford and support the revitalization of older, urbanized areas throughout the region

3. Develop in a manner that respects and preserves community character and key natural resources

4. Implement open space and natural resource protection plans that acknowledge and support the multi-town nature of natural systems

5. Support the creation of new employment, housing opportunities, and transportation choices, to meet the diverse needs of the region's citizens

6. Encourage regional cooperation in the protection of natural resources, the revitalization of urban areas, and economic development

3.2.2 Direct and Indirect Impact

Land Use

Impacts to land use are evaluated based on the effect that the Proposed Action will have on land use patterns, compatibility of land uses, and access to land as compared with the No-Action Alternative. The No-Action Alternative will constitute continuance of existing land use conditions.

The Proposed Action will not have any adverse direct or indirect effect on predominant land use patterns in the project vicinity and will be compatible with the mix of land uses existing in Hartford's Downtown. There will be no adverse change to access for motor vehicles as a result of the Proposed Action.

The Proposed Action includes some modifications to pedestrian access in the vicinity, including streetscape (pedestrian amenity) improvements, improved circulation within the HCC between the Coliseum and the *Town Square* development, and removal of the existing skywalks on Trumbull and Asylum Streets. These changes are discussed in more detail in Section 3.4 *Traffic and Parking*. It is anticipated that the proposed changes to pedestrian access will focus activity at the street level and increase the need for street crossings by pedestrians. Overall, the loss of the skywalks and increased demand for street crossings will have a minor adverse effect on safe and convenient access to land use. Trumbull, Asylum, and Church Streets are wide boulevards. While they have numerous crosswalks, it remains less safe to cross the street against four lanes of traffic than to utilize an enclosed skywalk. Conversely, the removal of the skywalks will also have a beneficial effect by focusing pedestrian activity at the street level, thus supporting the economic vitality of street-level land uses. The Greenberg report detailing a redevelopment strategy for the Downtown recommended removing segments of the skywalk system in the vicinity of the Civic Center to enhance connectivity of shared civic spaces in the Downtown.

Zoning

Both the No-Action Alternative and the Proposed Action are consistent with the zoning classification encompassing the project study area. All necessary zoning approvals for the Proposed Action have been granted by the City of Hartford. Therefore, there will be no direct or indirect impacts to zoning as a result of the Proposed Action.

Local and Regional Development Plans

The No-Action Alternative is not consistent with the revitalization goals expressed in local and regional plans, as it does not promote economic activity in the Downtown.

The Proposed Action supports the vision, goals, and objectives expressed in local and regional plans for future development of the City of Hartford and the Capitol Region. The Proposed Action will, therefore, have a beneficial effect on the implementation of these plans.

3.2.3 Cumulative Impacts

There are no cumulative impacts anticipated with the No-Action Alternative. The Proposed Action is one of a number of planned development projects targeted to Downtown Hartford. More detail on other planned and programmed projects is provided in Section 3.7 *Socio-economic, Demographic, and Housing Conditions*. The collective effect of these projects is expected to support and enhance Downtown land use patterns and stimulate in-fill and adaptive reuse of other Downtown properties. Consequently, the Proposed Action will have a beneficial cumulative impact on land use in the project study area and Downtown Hartford in general.

3.2.4 Mitigation

As no significant adverse impacts to land use are anticipated, no mitigation is proposed.

3.3 CONSISTENCY WITH STATE PLAN OF CONSERVATION AND DEVELOPMENT

The State Plan of Conservation and Development contains economic development, environmental quality, and public service infrastructure guidelines and goals for the State of Connecticut. According to the plan's Development Locational Guide Map, the project study area falls within a *Regional Center*. The highest priority state strategy for a *Regional Center* is to support rehabilitation and revitalization of the economic, social, and physical environment of these urban centers. The Proposed Action is consistent with the goals, objectives, and plans set forth in the State Plan.

3.4 TRAFFIC AND PARKING

The HCC is surrounded by public roadways, is served by public transit, and provides parking. Potential project changes to these elements and potential corresponding impacts are discussed in this section.

3.4.1 Existing Setting

All roadways in Connecticut are classified into different operational systems according to the function they are intended to fulfill. For example, major arterials are roads that serve primarily through travel from one community to another while minor collectors are roads intended to "collect" traffic from the local roads. Local roads provide access to private property or low volume public facilities. Within the vicinity of the site, Asylum Street is a one-way (westbound) two-lane roadway with on-street parking. It serves a dual function of a principal arterial from Farmington Avenue to High Street and in the direct vicinity of the site location it serves as a minor arterial. Trumbull Street is a four-lane minor arterial, two lanes in each direction, with on-street parking and has a center median between Asylum Street and Church Street. Trumbull Street traverses in the north-south direction. Church Street traverses in the east-west direction and is a two-lane collector, one lane in each direction, with on-street parking. Ann Street is also a collector road and is a two-lane one-way (northbound) directional roadway with on-street parking. The posted speed limit along these roadways ranges from 25 to 30 miles per hour (mph).

Traffic Flow and Operations

To characterize existing traffic conditions at the HCC site, traffic counts were conducted and intersection Level of Service (LOS) was evaluated for six existing intersections that could experience the greatest impact from the Proposed Action. These intersections, listed below and shown in Figure 5, were identified in conjunction with City of Hartford officials. All of

Figure 5: Local Roadway System - Studied Intersections

the study intersections are signalized except for the intersection of Asylum Street with the parking garage entrance/exit, which is stop controlled at the parking garage site entrance/exit.

1. Asylum Street & Spruce Street
2. Asylum Street & Ann Street
3. Asylum Street & Trumbull Street
4. Asylum Street & Parking Garage Access
5. Church Street & Trumbull Street
6. Church Street & Ann Street

Traffic Counts:
Existing turning movement count data was collected by Fitzgerald & Halliday, Inc. in August 2003 for the morning (7:00 AM – 9:00 AM) and afternoon (4:00 PM – 6:00 PM) peak travel periods. All traffic counts were collected under typical weekday conditions. In general, the current peak hours occur between 7:30 AM - 8:30 AM and 4:30 PM - 5:30 PM. Traffic count results are shown in Appendix C.

Intersection Level of Service Analysis:
A LOS analysis was conducted for all the study intersections per the procedures presented in the *Highway Capacity Manual 2000* (Transportation Research Board), and using the Highway Capacity Software (version 4.1). Signal phasing and timing data was obtained from the City of Hartford and was utilized for the operations evaluation of the study intersections. LOS is a measure of the delay experienced by vehicles at an intersection and is used to describe the operation of signalized and unsignalized intersections. It is expressed in an alphabetic scale, A to F. Level of Service A represents clear traffic flow and the best conditions. Level of Service F represents severely congested flow and is considered to be unacceptable. Intersections with long delay times at LOS E or F are least acceptable to most drivers and can be considered impacted in terms of traffic operations.

Results from the LOS analysis for the study area intersections for both the existing AM and PM peak hours are reported in Table 1.

Two of the six intersections were identified as locations with critical movements currently operating at poor levels of service (LOS E or F) during either the AM or PM peak hour. The intersections and relevant critical movements are the following:

Asylum Street at Spruce Street
- The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour
- The northbound and southbound thru and right-turn movements operate at either LOS E or LOS F during the PM peak hour

Asylum Street at Trumbull Street
- The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour

Table 1: Level of Service Analysis Summary Existing Conditions (2003)

	Overall Intersection Level of Service	
Intersection	AM Peak Hour	PM Peak Hour
Asylum Street at Spruce Street	F[1]	D[1]
Asylum Street at Ann Street	C	C
Asylum Street at Trumbull Street	C[2]	C
Asylum Street at Parking Garage Site[3]	C	B
Church Street at Trumbull Street	C	C
Church Street at Ann Street	C	D

Source: Fitzgerald & Halliday, Inc., September 2003

[1]The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour. In PM peak hour, the northbound and southbound thru and right-turn movements operate at either LOS E or LOS F.

[2]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour under existing conditions.

[3]Unsignalized intersection.

Transit Service and Operation

The HCC is well served by bus transit. Connecticut Transit (CT Transit) provides public local and express transit service in the City of Hartford. There are currently four routes that serve the existing HCC and Coliseum. These routes are listed below:

- Route A - Hillside Avenue/Asylum Avenue
- Route E - Farmington Avenue
- Route F - Ashley Street, Broad Street
- Route S - Wedgewood Apartments/Garden Street

In general, Routes A and S provide weekday service between 5 AM and 7 PM. Routes E and F provide weekday service between 5 AM and 1 AM. Saturday and Sunday service is also provided by all routes. Seven north-south bus routes (K, N, Q, S, T, U, W) use Main Street, a block away from the project site.

Parking

The existing site provides public parking and is accessed from Asylum Street. Three hundred eighty-eight (388) parking spaces are provided on site. Information provided by NIC indicates that the on-site parking garage reaches up to approximately 95% utilization during normal business hours. During the weekends and weeknights, the parking facility is approximately 15% utilized. On-street parking is also available on Asylum, Trumbull, Ann, and Church Streets.

Pedestrian and Bicycle Facilities

There is a considerable amount of pedestrian activity within the study area. Sidewalks are provided on both sides of the roadways bounding the HCC. Pedestrian skywalks across Trumbull and Asylum streets provide a pedestrian connection from the HCC to adjacent buildings (CIGNA and City Place). In addition, crosswalks and pedestrian signals are provided at the study intersections. There are no bicycle facilities within the study area.

Crash Summary

Crash data was obtained from the Hartford Police Department for the latest three (3) years (August 2000 – August 2003) for sections of Asylum, Trumbull, and Church Streets located within the study area. A summary by street is provided below.

Asylum Street: During the three-year period, 47 accidents occurred on Asylum Street from its intersection with Spruce Street to its intersection with Main Street. Nine (9) accidents resulted in injuries and there were no fatalities. One (1) accident involved a pedestrian.

Trumbull Street: Between Asylum Street and Church Street, there were 21 accidents during the three-year period. The single accident that involved a pedestrian was the only accident resulting in injuries. There were no fatalities during this time period.

Church Street: There were 19 accidents on Church Street from High Street to Main Street during the time period. Four (4) of the accidents resulted in injuries and none of the accidents led to fatalities. There were no accidents involving pedestrians.

Based on these data, there does not appear to be an existing high accident location or pattern of correctable accident occurrence in the study area.

3.4.2 Direct and Indirect Impact

Traffic Impacts

In order to estimate traffic impacts from the Proposed Action, traffic flow and operations were evaluated for the future based on the year 2006, the year the development is anticipated to be in operation. Background traffic growth, roadway improvements, and trips generated by the proposed development were estimated in order to project future traffic volumes. Background traffic growth was assumed to occur at 1.2 percent per year, based on data for growth rates in urban environments similar to the City of Hartford. Officials from the City of Hartford indicated that there are no planned and/or programmed developments that will particularly impact travel demand or patterns within the study area.

Future (2006) traffic impacts are anticipated under the No-Action Alternative, as shown in Table 2, based on traffic projections assuming the No-Action Alternative (traffic volume projections are shown on figures in Appendix C). Results indicate that three of the six study intersections will have certain individual movements operating at LOS E or LOS F.

Table 2: Level of Service Analysis Summary No-Action Alternative (2006)

	Overall Intersection Level of Service	
Intersection	AM Peak Hour	PM Peak Hour
Asylum Street at Spruce Street	F[1]	D[1]
Asylum Street at Ann Street	C	C
Asylum Street at Trumbull Street	C[2]	C
Asylum Street at Parking Garage[4]	C	B
Church Street at Trumbull Street	C[3]	C
Church Street at Ann Street	C	D

Source: Fitzgerald & Halliday, Inc., September 2003

[1]The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour. In PM peak hour, the northbound and southbound thru and right-turn movements operate at either LOS E or LOS F.

[2]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour under existing conditions.

[3]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour.

[4]Unsignalized intersection.

To evaluate future (2006) traffic flow conditions for the Proposed Action, the change in traffic volumes from existing to proposed conditions must be determined. The estimated trips generated by the existing HCC were compared to the estimated trips generated by the Proposed Action by use of the Institute of Transportation Engineers publication, *Trip Generation 6th Edition*. Information about existing and proposed uses came from Northland Two Pillars, LLC and NIC, respectively, regarding the mix of land uses, and is shown in Table 3.

Table 3: Existing and Proposed Uses at HCC Facility

	Approximate Size		
Land Use	Existing Occupied (August 2003)	Proposed (2006)	Units
General Office/Flex	3,300	93,000	Gross square feet
Retail	62,700	54,000	Gross square feet
High-Rise Apartment	N/a	262	Dwelling units

Source: Fitzgerald & Halliday, Inc., September 2003

Using the trip generation rates for the existing and proposed land uses, the number of anticipated trips generated was calculated. The Proposed Action is expected to generate 282 trips compared to 71 trips under existing conditions during the AM peak hour. During the PM peak hour, the Proposed Action is expected to generate 432 trips compared to 240 trips under existing conditions. While the proposed condition appears to more than double the existing trips generated, it must be noted that existing trips were based on the HCC's very low retail/office occupancy rate, which generates considerably fewer trips than if the existing

facility were at full occupancy. Table 4 summarizes the estimated trips generated during the AM and PM peak hours for the existing and proposed land uses.

Table 4: Trip Generation Summary AM and PM Peak Hours

		AM Peak Hour						
		Existing (2003)			Proposed (2006)			
Land Use Code	Description	Enter	Exit	Total	Enter	Exit	Total	Trip Difference
710	General Office	5	1	6	127	18	145	139
820	Shopping Center	40	25	65	34	22	56	-9
222	High-Rise Apartment	n/a	n/a	0	21	60	81	81
	Total	45	26	71	188	105	282	211

		PM Peak Hour						
		Existing (2003)			Proposed (2006)			
Land Use Code	Description	Enter	Exit	Total	Enter	Exit	Total	Trip Difference
710	General Office	1	4	5	23	115	138	133
820	Shopping Center	113	122	235	97	105	202	-33
222	High-Rise Apartment	n/a	n/a	n/a	55	37	92	92
	Total	114	126	240	175	257	432	192

Source: Fitzgerald & Halliday, Inc., September 2003

These trip generation estimates assume that all trips are made by private automobile, but not all workers or shoppers will arrive by auto. To account for the available transportation options, the various transportation mode splits (proportion of trips that drive alone, carpool, walk, or use public transportation) were applied to the estimated net trips to determine the number of new vehicle trips. Estimates of modal splits based on U.S. Census data and the Connecticut Department of Transportation (ConnDOT) travel demand model were utilized. A summary of the data is presented in Table 5.

Table 5: Transportation Mode Split

	Trips Originating from Hartford		Trips Destined to Hartford	
Mode	Work Trips (1990)	All Purpose Trips (2000)	Work Trips (1990)	All Purpose Trips (2000)
Drive Alone	56%	48%	70%	51%
Carpool	16%	44%	15%	41%
Bus	17%	8%	10%	8%
Train	0%	0%	0%	0%
Walk	11%	0%	4%	0%
Other	1%	0%	1%	0%
Total	100%	100%	100%	100%

Source: BSC Group Town Square Application, November 2002

Once the transportation modal splits were applied, results conclude that the change in trips from Existing to Proposed Action is approximately 147 vehicle trips during the AM peak hour and 134 vehicle trips during the PM peak hour. A summary of the data is presented in Table 6.

Table 6: Trip Generation by Transportation Mode

Description	Trip Difference	Equivalent Person Trips	Drive Alone	Carpool/ Vanpool	Vehicle Trips
General Office	139	167	117	25	104
Shopping Center	-9	-11	-6	-4	-6
High-Rise Apartment	81	97	54	16	49
Total	211	253	166	36	147

Description	Trip Difference	Equivalent Person Trips	Drive Alone	Carpool/ Vanpool	Vehicle Trips
General Office	133	160	112	24	99
Shopping Center	-33	-40	-20	-16	-21
High-Rise Apartment	92	110	62	18	56
Total	192	230	153	25	134

Source: Fitzgerald & Halliday, Inc., September 2003

The estimated number of net new vehicle trips was added to the 2006 No-Action Alternative traffic volumes to establish the 2006 Proposed Action traffic volumes (shown in Appendix C). Results from the level of service analysis under the 2006 Proposed Action are reported in Table 7. Under the 2006 Proposed Action, three of the seven intersections will have critical movements operating at poor levels of service (LOS E or F) during either the AM or PM peak hour. The critical movements are listed below:

Asylum Street at Spruce Street

- The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour
- The northbound and southbound thru and right-turn movements operate at either LOS E or LOS F during the PM peak hour

Asylum Street at Trumbull Street

- The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour

Church Street at Trumbull Street

- The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour

Table 7: Level of Service Analysis Summary Proposed Action (2006)

	Overall Intersection Level of Service	
Intersection	AM Peak Hour	PM Peak Hour
Asylum Street & Spruce Street	F[1]	D[1]
Asylum Street & Ann Street	C	C
Asylum Street & Trumbull Street	D[2]	C
Asylum Street at Parking Garage[4]	C	B
Church Street & Trumbull Street	C[3]	C
Church Street & Ann Street	C	D
Trumbull Street at Parking Garage[4]	B	B

Source: Fitzgerald & Halliday, Inc.

[1]The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour. In PM peak hour, the northbound and southbound thru and right-turn movements operate at either LOS E or LOS F.

[2]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour under existing conditions.

[3]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour.

[4]Unsignalized intersection.

Traffic Impact Summary:
Under existing conditions, two of the study intersections are impacted by inadequate LOS (individual movements operating at LOS E or F). Under future conditions, three intersections will be impacted. However, future impacts will be similar under the No-Action Alternative and the Proposed Action. No adverse impacts are therefore attributable to the Proposed Action.

Nonetheless, as background traffic growth resulting from population increases overall, and site-generated trips flow into the transportation network surrounding the site, traffic operations will slightly decline, as noted above, if no improvements are made. Measures such as optimizing signal timing may be implemented by the City of Hartford to improve the levels of service at the impacted intersections as part of their ongoing signal-optimization program. The estimated LOS with improvements to these intersections is indicated in Table 8.

Site-generated traffic from the Proposed Action will not have any significant impact on traffic operations on any state highway. The State Traffic Commission (STC) concluded that no STC permit would be required for the project (Correspondence from STC to City of Hartford dated February 22, 2002, see Appendix B).

Table 8: Traffic LOS Improvement Measures

		Overall Intersection Level of Service			
		Build (2006)		Build with Mitigation (2006)	
Intersection	Improvement Measure	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Asylum Street & Spruce Street	Optimize signal timing	F[1]	D[1]	D	D
Asylum Street & Trumbull Street	Optimize signal timing	D[2]	C	C	C
Church Street & Trumbull Street	Optimize signal timing	C[3]	C	C	C

Source: Fitzgerald & Halliday, Inc., September 2003

[1]The northbound left-turn and right-turn movements operate at LOS F during the AM peak hour. In PM peak hour, the northbound and southbound thru and right-turn movements operate at either LOS E or LOS F.

[2]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour under existing conditions.

[3]The westbound left, thru, and right-turn movements operate at a LOS F during the AM peak hour.

Transit Service and Operations

CT Transit will continue to operate their transit routes in the City of Hartford. The Proposed Action will accommodate the transit system by providing a bus shelter for the existing bus stop on Asylum Street to protect bus patrons from the elements, which will be a small but beneficial impact.

Parking

Under the Proposed Action, a total of 816 parking spaces will be provided on site. These will consist of the 388 existing parking spaces, which will remain for general use serving the retail spaces, health club, offices, transient parkers, and the Coliseum, plus the 428 new spaces provided by the new parking garage, to accommodate the tenants of the proposed residential development. There will be no internal connections between the two parking garages. Vehicular access to the new garage will be from Trumbull Street. The Trumbull Street driveway entry and egress will be restricted to right turn-in and right turn-out only, which will eliminate potential vehicular turning conflicts and minimize the impact to traffic flow at the driveway serving the new parking garage

Based on the zoning ordinance requirement of 627 spaces, the Proposed Action will exceed the zoning requirement for parking spaces for the proposed development. The development has sought and received waivers from requirements for attendant parking for tandem parking spaces for the residential parking garage from the City. Since the provided parking will adequately accommodate anticipated parking demand and will not eliminate any existing parking, the Proposed Action will have no adverse impacts on parking.

Pedestrian and Bicycle Facilities

Pedestrian connections will be enhanced under the Proposed Action. The current sidewalk system includes crosswalks with pedestrian signals, planters close to or against the building façade, some shrubs and ground cover, and some trash barrels. There are no other pedestrian amenities. The Proposed Action includes the creation of a more pedestrian-friendly environment on Trumbull and Asylum Streets. The site plan and written description of the pedestrian amenities associated with *Town Square* provided by NIC include the following:

- Exterior entrances to street level retail
- Three separate street level entrances to the atrium and interior spaces
- Sidewalk pavement set against the building façade (removal of concrete planters)
- A transition strip at the street curb with a series of street trees and planters
- Varied paving materials
- Seating areas

The elimination of the existing concrete planters and skybridges will provide improved physical and visual access to the street level retail spaces. The street seating will provide respite areas and encourage pedestrian activity. NIC has stated that all pedestrian amenities will be in accordance with City of Hartford guidelines. The Proposed Action will also reconstruct and incorporate sidewalks on Church and Trumbull streets to better identify the bus lines and stops. The result will be a beneficial impact to pedestrian access overall.

3.4.3 Cumulative Impacts

The Proposed Action will intensify the existing land uses on the HCC site. Incremental increases in background traffic combined with the net increase in site-generated traffic will result in slight decline of traffic operations at certain study intersections if no improvements are made. These impacts are identical under the No-Action Alternative and the Proposed Action. Therefore, the Proposed Action is not anticipated to have any significant-adverse cumulative impacts on traffic. The Proposed Action is also not anticipated to have any adverse cumulative impacts on parking, transit service and operations, or pedestrian and bicycle facilities.

3.4.4 Mitigation

No adverse traffic impacts are anticipated from the Proposed Action. Consequently, no mitigation is proposed. However, it is recommended the City of Hartford improve the levels of service at the impacted intersections as part of their ongoing signal-optimization program.

3.5 AIR QUALITY

3.5.1 Existing Setting

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants to ensure the protection of human

health and public welfare, including carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), ozone (O_3), and particulate matter (PM), which is now classified both as PM_{10} (PM with a diameter of 10 microns or less) and $PM_{2.5}$ (PM with a diameter of 2.5 microns or less). The Clean Air Act of 1970 and subsequent amendments require states to monitor air quality to determine if regions in the state meet the NAAQS. If a region shows violations of any of the NAAQS, the region is classified as being in "nonattainment" for that pollutant, and the state must develop an air quality plan, called a State Implementation Plan, that will bring that region into compliance (or attainment).

Air monitoring is conducted throughout Connecticut by the Connecticut Department of Environmental Protection (DEP). Data collected at the monitoring sites help establish background air quality levels. Project-related air quality impacts are generally assessed in light of existing ambient air quality and attainment status in the Proposed Action area. The current air quality attainment designations for the Hartford region and Hartford County are noted below.

CO, NO_2, Pb, SO_2: The entire state of Connecticut and therefore also the Hartford region is in attainment.

O_3: The entire state of Connecticut and therefore also the Hartford region is designated as non-attainment for the 1-hour O_3 standard. In July of 1997, EPA promulgated a new 8-hour O_3 standard, but attainment designations have been delayed by legal challenges.

PM_{10}: Hartford County is currently in attainment of PM_{10}. In July of 1997, EPA promulgated a new NAAQS for $PM_{2.5}$. EPA is currently establishing a nationwide monitoring network for $PM_{2.5}$ but will not make attainment designations until at least 2004 (*U.S. EPA Green Book*, Updated February 2003).

Emergency generators and boilers can be a source of air pollution. Currently, there is one emergency generator located within the Coliseum, which handles emergency power for the Coliseum and the parking garage. The HCC mall utilizes battery powered emergency lights. Since the HCC site is serviced by a steam and chilled water distribution system provided by the Hartford Steam Company, there are no boilers located on site.

3.5.2 Direct and Indirect Impact

Mobile Sources:
Mobile source means a source designed or constructed to move from one location to another during normal operation such as, automobiles, buses, trucks, etc. For traffic-generating projects, the criteria pollutants of primary concern are CO and O_3. The NAAQS for CO are a 1-hour average concentration of 35 parts per million (ppm) and an 8-hour average concentration of 9 ppm. The NAAQS for O_3 are a one-hour average of 0.12 ppm and an 8-hour average of 0.08 ppm. Emissions of PM_{10} and $PM_{2.5}$ are also potential concerns, particularly from diesel engines.

There is potential for increase in generation of air pollutants at the HCC facility generated by increased vehicle activity. In order to address local air quality concerns, a microscale analysis

for CO was conducted to determine if the Proposed Action would interfere with the maintenance of the NAAQS for CO. Air quality modeling conducted for the analysis was performed using MOBILE 5b and CAL3QHC to predict CO concentrations for the Proposed Action. The modeling reflects mobile sources (automobiles and buses) and traffic data. Traffic data input came from the EIE traffic impact analysis (Appendix C). Results from the air quality analysis are included in Appendix D.

Results from the model represent the one-hour average CO concentrations at various locations due to the modeled traffic, in addition to the one-hour background concentration of 3.0 ppm. As shown in Table 9, the predicted future maximum one-hour and eight-hour CO concentrations are well below the CO NAAQS. Predicted concentrations in 2006 are lower than existing 2003 CO levels. Thus, the proposed project will not have an adverse impact on the surrounding CO levels.

Table 9: Highest CO Predictions for Future Proposed Action

	Highest 1-hour Concentration (ppm)	Corresponding 8-hour Concentration (ppm)	Location
NAAQS for CO	**35**	**9**	
EXISTING 2003 Peak AM	7.6	4.6	Trumbull Street/Church Street NW corner + Asylum Street/Trumbull Street SE corner
EXISTING 2003 Peak PM	8.9	5.3	Asylum Street/Trumbull Street SE corner
PROPOSED ACTION 2006 Peak AM	6.8	4.1	Trumbull Street/Church Street NW corner + Asylum Street/Trumbull Street SE corner
PROPOSED ACTION 2006 Peak PM	7.6	4.6	Asylum Street/Trumbull Street SE corner

Source: Fitzgerald & Halliday, Inc., November 2003

Results of the analysis indicate minimal project-related impacts to air quality for the following reasons:

- Air quality monitoring data show that existing CO levels in the area are already well below the CO NAAQS. CO hot spots are highly unlikely in the vicinity of the proposed project. Modeling performed for potential receptors in the project vicinity confirmed that CO at these receptors will not exceed the NAAQS, even with the worst case scenario.

- The air quality analysis showed that the Proposed Action does not result in any exceedances of CO, based on traffic data. The traffic analysis shows that, in general, the studied intersections under the Proposed Action will continue to operate at least as well as the No-Action alternative or will be improved with the implementation of

signal optimization improvements. These measures will minimize, and even reduce, the likelihood of CO hotspots caused by idling and slow-moving vehicles.

- The low level of trips generated by the Proposed Action relative to total regional trips is unlikely to negatively impact regional air quality. VOC, NOx, and CO emissions from the transportation system are currently below those allowed by DEP. Thus, the effects of increased travel can be accommodated without causing the emission budgets to be violated, and as a result, will not cause or contribute to further violations of the NAAQS. Furthermore, recent monitored ozone exceedances are primarily due to the transport of ozone and other pollutants from the southwest. The low number of additional vehicle trips is highly unlikely to cause or contribute to further ozone exceedances.

Stationary Sources:
Stationary source means any building, structure, facility, or installation, which emits or may emit a regulated air pollutant. Since the heating system will be provided by the Hartford Steam Company, no boilers are proposed. However, the Proposed Action will incorporate a new emergency generator. The existing emergency generator will not be used for the Proposed Action and is considered to be separate from it. It is anticipated that the new emergency generator will not exceed the threshold of 15 tons or more per year of any individual air pollutant. Therefore, the project as proposed will not trigger state or federal indirect air source permits; therefore, a quantitative analysis is not required by regulatory agencies.

3.5.3 Cumulative Impacts

Cumulative impacts on air quality resulting from the Proposed Action are anticipated to be negligible.

3.5.4 Mitigation

It is not anticipated that any short or long-term adverse air quality impacts from motor vehicles will occur as a result of the project. Therefore, no traffic-related air quality mitigation measures will be required.

Natural gas based fuel is recommended for the new emergency generator, if practicable. NIC anticipates operating the new emergency generator under the permit exemption provisions available under the New Source Review regulations. The owner's compliance with the exemption requirements will mitigate any potential air quality impacts associated with the emergency generator.

Air quality impacts during construction are addressed in Section 3.21 *Construction Period Impacts*.

3.6 NOISE

3.6.1 Existing Setting

In general, noise sensitive land uses include a) residences, hotels, and other buildings where people sleep, b) institutional land uses such as churches, schools, hospitals, and libraries, and c) various tracts of land where quiet is an essential element of the land's intended purpose, such as a National Historic Landmark where outdoor interpretation routinely takes place.

A site visit was conducted to identify noise sensitive land uses in the project vicinity and to obtain a better understanding of the existing noise environment at the HCC site. The project site is located in an urban setting in downtown Hartford amidst a mix of land uses including commercial, retail, institutional, entertainment/hotel and office space. Additionally, Interstate 84 (I-84) is located approximately one block north of the project site. The project site occupies an entire city block that is bounded by Church Street on the north, Trumbull Street on the east, Asylum Street on the south, and Ann Street on the west.

Noise sensitive land uses within one block of the site include a church, a school, and two hotels. St. Patrick Anthony's Franciscan Friars Church is located northwest of the project site and occupies the southwestern quadrant of the Church Street/Ann Street intersection. The Sports Sciences Magnet Public High School is located to the southwest of the project site and occupies the southwestern quadrant of the Asylum Street/Ann Street intersection. The Goodwin Hotel is located south of the project site and west of the Asylum Street/Haynes Street intersection. The Hilton Hotel is located north of the project site and occupies the northwestern quadrant of the Trumbull Street/Church Street intersection. There are no other noise sensitive land uses within one block of the Proposed Action site.

Existing (2003) ambient noise levels have not been measured in the project vicinity and no prior studies quantifying current noise levels are known to exist for the project study area. Despite the lack of quantitative noise data for the project site, urban environments are generally considered to be noisy places, with much of the noise generated by traffic on busy city streets and nearby highways. Noise levels within urban environments typically range from 60 dBA (A-weighted decibels) to 80 dBA (*Transit Noise and Vibration Impact Assessment*, DOT-T-95-16, April, 1995). Existing noise levels in downtown Hartford in the vicinity of the proposed site are anticipated to fall within this decibel range.

3.6.2 Direct and Indirect Impact

The No-Action Alternative represents no change to the existing noise environment and would have no adverse noise effects.

The Proposed Action will not result in any direct increase in noise levels in the project vicinity. The project design plans call for most of the potentially noise-generating mechanical equipment to be internal to the building or acoustically enclosed. Building exhaust fans will be located on the roofs, while air intake and exhaust fans for the existing Asylum Street garage will be re-routed to minimize noise along Asylum Street.

The Proposed Action will have limited indirect adverse effects on noise levels in the project vicinity. It will create additional residential and retail space, and will contribute to a minor increase in traffic volumes (described in Section 3.4 *Traffic and Parking*) and pedestrian activity on adjacent city streets. One of the aims of the Proposed Action is to create a sense of place with street level activity on a 24-hour basis. However, this traffic increase and increase in human activity is not likely to result in a significant increase in noise, since the project area is an existing urban environment with associated ambient noise including constant traffic activity and the nearby interstate highway. The major traffic activity currently associated with Coliseum events would not be changed by project implementation.

Noise impacts from the Proposed Action will be most noticeable during demolition and construction activities. These are addressed in Section 3.21 *Construction Period Impacts*.

3.6.3 Cumulative Impacts

Cumulative impacts are those that could result from the noise generated or associated with the Proposed Action when added to other reasonably foreseeable and substantive increases in noise generation in the project vicinity. No such substantive increases in point sources of noise or noise-generating activities are anticipated. Therefore, there no cumulative noise impacts are anticipated as a result of the Proposed Action.

3.6.4 Mitigation

As no significant adverse noise impacts are anticipated, no mitigation is proposed.

3.7 SOCIO-ECONOMIC, DEMOGRAPHIC, AND HOUSING CONDITIONS

3.7.1 Existing Setting

The following provides an overview of socio-economic, demographic, and housing conditions in the project study area, including neighborhoods. Data available from the U.S. Census Bureau (Census 2000), Connecticut Economic Resource Center, and DECD were reviewed to provide a picture of existing socio-economic, demographic, and housing conditions.

Socio-economics and Demographics

Factors that define socio-economic and demographic conditions include resident population, household characteristics, race, employment, and income levels. Economic conditions such as jobs and major employers are described in Section 3.8 *Economy*.

The demographic data provided by the Census (year 2000) are shown in Table 10, which compares data for Connecticut, the CRCOG region, City of Hartford, and Census Block Group 5021-001, which includes the project site. The geographic area covered by Census Block Group 5021-001 is shown in Figure 6.

Figure 6: Census Block Group

Table 10: Comparative Socio-economic Data

	Project Area (Block Group 5021-001)	Hartford	CRCOG Region	Connecticut
Resident Population				
Population	549	121,578	721,320	3,405,565
Percent Minority	30.1	72.3	24.1	18.4
Median Age	44.3	31.7	38.6	37.4
Household Characteristics				
Total Households	305	44,986	279,871	1,301,670
Average Household Size	1.3	2.6	2.5	2.5
Employment				
Percent Of Work Age	86.9	73.0	77.8	77.9
Percent Not In Labor Force	36.5	43.1	34.5	33.4
Employed	272	42,402	345,138	1,664,440
Percent Employed	57.0	47.8	61.5	62.8
Unemployed	31	8,029	22,258	92,668
Percent Unemployed	6.5	9.1	4.0	3.5
Income/Poverty				
Median Household Income	$67,625	$24,820	$63,415	$53,935
Below Poverty Level*	56	35,741	62,592	259,514
Percent Below Poverty Level	10.2	29.4	8.7	7.6

*Poverty is defined in the 2000 Census as $8,500 per capita annually.

As can be noted, the project study area has a low residential population. Census Block Group 5021-001 represents less than one half of one percent of the City's total population. Based on existing land uses in this Block Group, it is likely that, at the time of the Census, the majority of these residents lived in one high-rise apartment complex located south and east of the HCC. The data also indicate that these are predominantly single person households with a comparatively high standard of living, given that the median household income is higher than that of the City, region, and state. The percentage of those living below the poverty level is higher than in the region and the state as a whole, but comparatively low relative to the City.

Housing and Neighborhoods

Information on housing was obtained primarily from the Census 2000 Block Group data. Information on City of Hartford neighborhoods was obtained from the City of Hartford Planning Department (personal communication, August 26, 2003) and *Hartford Plan of Development 1985-2000* (Commission on the City Plan, 1986).

There is limited housing within the immediate vicinity of the Proposed Action. Housing conditions within Census Block Group 5021-001 as compared to the City of Hartford is shown in Table 11.

Table 11: Housing Conditions In Project Area Per Census 2000 Data

	Project Area (Block Group 5021-001)	Hartford
Households	305	44,986
No Vehicle Households	47	16,257
Percent No Vehicle	15.4	36.1
Occupied Households	204	39,328
Percent Occupied	66.9	87.4
Vacant Households	101	5,658
Percent Vacant	33.1	12.6
Renter Occupied Households	217	33,922
Percent Renter Occupied	71.2	75.4
Owner Occupied Households	88	11,064
Percent Owner Occupied Households	28.9	24.6

The Census data indicate that the majority of available housing in the area is rental. Since the census, two new apartment complexes in this Census Block Group, 55 On Park (leasing for September occupancy) and Trumbull Centre (in construction), have gone into development. These two projects will provide 232 upscale housing units in the project vicinity in the same competitive market as *Town Square*.

Hartford neighborhoods have been defined geographically for planning purposes by the City of Hartford Planning Department. The Proposed Action falls within the Downtown Neighborhood. This neighborhood is roughly triangular in shape and encompasses the area from I-84 west of the HCC to the Connecticut River on the east and from Buckingham Street on the south to the intersection of I-91 and Market Street to the north. The Hartford Plan notes that the Downtown Neighborhood is the core of the City with predominantly office, commercial, and retail uses. It is also the hub of City government. A recent addition to the Downtown is the Capitol Community-Technical College located in the former G. Fox building. Cohesive factors creating a sense of neighborhood Downtown include street level retail, daytime pedestrian activity generated by office workers, college students and visitors, historic architecture, several signature style buildings, as well as numerous restaurants and cultural attractions such as the library and Wadsworth Athenaeum. There is no formal neighborhood association that represents neighborhood interests.

3.7.2 Direct and Indirect Impacts

Socio-Economics and Demographics

The No-Action Alternative will represent a continuation of existing socio-economic and demographic conditions. The No-Action Alternative will have no direct or indirect impact on employment, housing opportunities, or demographic mix, including resident income levels.

The Proposed Action will provide new upper-income residential options in the project study area. *Town Square* will offer 262 (lease only) luxury apartments. While the demographic makeup of potential new residents cannot be predicted, the *Town Square* development is

designed to attract upper-income one and two person households, most without children. When occupied, therefore, the Proposed Action will result in an increased number of households and employed persons. Based on the market analyses conducted for the *Town Square* project, it is estimated that the Proposed Action will contribute 450 to 470 new residents in the project study area. No current residents will be displaced and existing retail and service employment opportunities in the HCC will be replaced. Consequently, the Proposed Action will have a beneficial effect on socio-economic and demographic conditions in the project study area.

Housing and Neighborhoods

The No-Action Alternative will represent a continuation of existing housing and no physical changes in the neighborhood setting. Physical neighborhood characteristics can include businesses located within walking distance of housing, a cohesive system of pedestrian access, common architectural themes, and the presence of community institutions such as libraries, churches, and fire stations. While the No-Action Alternative will not have any direct impact on these physical neighborhood elements, if the economic viability of the HCC Mall continues to decline and the project site remains predominantly vacant, there could be an adverse effect on perceptions of neighborhood quality of life. Vacant and declining commercial buildings located in urban centers can undermine neighborhood sense of cohesion, aesthetics, and safety.

The Proposed Action is anticipated to have both direct and indirect beneficial impacts on housing and neighborhood conditions. The proposed streetscape improvements will enhance neighborhood access and aesthetics. The presence of new neighborhood residents and associated economic activity will strengthen the neighborhood economic base and enhance the perception of neighborhood quality of life.

An additional consideration is the availability of basic goods (grocers, pharmacies, etc.) to serve both existing and new neighborhood residents. Currently there are very limited basic goods retailers within walking distance (1/4 mile) of the HCC. The NIC has indicated they hope to secure a grocer and other basic goods providers as tenants for a portion of the *Town Square* retail space. It can also be anticipated that the presence of new residents from the *Town Square* apartments as well as from the other two new developments noted earlier will induce location of basic goods providers in the immediate area. Consequently, it is anticipated that the Proposed Action could have a beneficial effect on the availability of basic goods to serve neighborhood residents.

3.7.3 Cumulative Impacts

The No-Action Alternative will have no cumulative impacts on socio-economic, demographic, or housing and neighborhood conditions in the project study area.

A number of commercial, cultural, entertainment, and residential projects are planned for Downtown Hartford. These are enumerated in the following section 3.8 *Economy* (also see Figure 7). The Proposed Action in association with these planned and programmed projects can be anticipated to have a beneficial cumulative effect on socio-economic, housing, and

neighborhood conditions in the project study area. The combined increase in residential population in the study area from the *Town Square* when added to the two closest new developments (Trumbull Center and 55 On The Park) is projected at about 830 to 870 people. The combined impacts of these projects are also expected to include a strengthening of the sense of place for the Downtown, the creation of a 24-hour-a-day residential environment, growth in businesses that will serve basic consumer needs (such as groceries and pharmacies), and expansion of employment opportunities.

3.7.4 Mitigation

As no adverse socio-economic, demographic, housing, or neighborhood impacts are anticipated, no mitigation is proposed.

3.8 ECONOMY

3.8.1 Existing Setting

Information on the economy of the City of Hartford and the project study area was derived primarily from the Census 2000 and a Downtown retail assessment prepared by AMS (September 2003). The key elements of the economy considered for this evaluation include jobs, major employers, and planned and programmed development projects.

Hartford, as the capitol of Connecticut, occupies a position of economic importance to the center of the state. The Hartford labor market area is the largest in Connecticut; numbering 616,300 resident workers as of July 2003, with Hartford's labor force of 55,269 accounting for nine percent of the total. Hartford's unemployment rate was 10.2 percent in August while the region's was 5.4 percent. By comparison, the state's unemployment rate was five percent.

Hartford's total job count of 122,200 (June 2001, latest available) represented 20 percent of the region's job base, demonstrating that the City is a major employment center. Particularly important to Hartford and the Hartford labor market area is the insurance and financial services industry cluster, which was responsible for more than 70,000 jobs in 2002, or more than one in 10 jobs in the region. Major employers in this cluster include Aetna Life and Casualty, ITT Hartford, and the Travelers Company. Other major employers include the State of Connecticut, Hartford Hospital, and St. Francis Hospital.

Hartford is a major office market center, with a total of 10.7 million square feet in the central business district. As of June 2003, the vacancy rate was 22.4 percent or 2.4 million square feet. Downtown Hartford is no longer a major retail destination, but currently serves the sizeable daytime working population and Hartford's neighborhood residents. Approximately 550,000 square feet of retail space is currently occupied or available; vacancy for the City as a whole was 15.7 percent in 2003. There are approximately 170 businesses downtown, with almost half of these being eating and drinking establishments, employing 1,400. There are also 20 apparel and accessory stores and 11 home furnishing stores (mainly radio, TV, consumer electronic and music stores). Jewelry stores totaled six. There are five food stores

and all are small in size, with $3 million (M) in sales. Retail sales for the area aggregate $141M, of which $70.5M was in the restaurant sector.

Many current development projects are underway or planned which will significantly reshape Hartford, especially the Downtown (Figure 7). In terms of investment, the currently planned (including *Town Square*) and ongoing projects total public and private investment of roughly $970 million, summarized in Table 12 below. The core of this effort is the Six Pillars Program promulgated in 1998 which includes the following projects:

- Convention center/hotel and sports complex (convention center/hotel ongoing, Rentschler Field, East Hartford, completed)
- Riverfront park system (ongoing)
- New community college building (Capitol Community College relocation to former G. Fox department store, completed)
- Rejuvenated civic center
- Increased parking (Morgan Street Garage, completed)
- Demolition or redevelopment of vacant structures and the development of at least 1,000 housing units for emerging and maturing households (ongoing)

Table 12: Hartford Development Projects Overview

Development Project	Cost in Millions (M)	Description
CT Convention Center & Hartford Marriott Downtown	$192 Convention Center $77 Hotel $269 Total	Convention center at Adriaen's Landing with 700 room hotel (first phase 409 rooms)
Town Square (Proposed Action)	$150	262 apartments, retail and office space, garage
Wadsworth Athenaeum Museum of Art	$120	Expansion to improve circulation, exhibit space and public amenities
Colt Gateway	$110	240 apartments, 400,000 SF commercial space
Front Street	$100	200 apartments, 150,000 SF retail, garage
CT Center for Science & Exploration	$100	Regional cultural destination 100,000-150,000 SF (preliminary)
Temple Street	$43	124 apartments, garage
Hartford Public Library	$42	44,000 SF expansion, additional parking
Trumbull Center	$38.5	100 apartments, retail, garage
Trinity College Library	$35	52,000SF expansion, new resource center
CPTV/WNPR	$30	New broadcast facility
55 on the Park	$7	132 apartments, restaurant
TOTAL	**$967.5**	

Source: Motyka and Phillips (Hartford Business Journal - undated)

3.8.2 Direct and Indirect Impact

Because one of the primary purposes of the Proposed Action is to have a positive economic effect on revitalization of the City of Hartford, this EIE considers both the economic and the fiscal impact on the City of Hartford. Economic impacts will be felt in terms of jobs/earnings

Figure 7: Location of Planned and Programmed Development Projects

and consumer spending, while fiscal impacts will be felt in terms of change in property tax revenues from both the project site and from *Town Square* residents in the form of automobile taxes.

It should also be noted that NIC had a market assessment prepared to estimate the potential economic viability of the *Town Square* development (M/PF Research Inc., *Town Square Apartment Development Potential*, 2003). This market assessment was peer reviewed by an independent market analysis firm (AMS Advisory Services) for DECD. The conclusion of the M/PF Research report was that the central Hartford market area offers a "very healthy environment for new apartment development." It also concluded that the Proposed Action would yield 95 percent occupancy (for the apartment units) about 10 months after first being available for leasing. The independent peer review of the M/PF Research market assessment concluded that the study presented adequate research and data to support who the market is, what the market will want in terms of apartment living, and what the market is willing to pay.

Economic Impacts

The economic impacts of the No-Action Alternative will likely be either a continuance of existing conditions or a worsening decline in economic activity. As such, the No-Action Alternative may have adverse direct and indirect effects on economic conditions in the Downtown.

Economic impacts of the Proposed Action have been calculated for both the construction and operational phases of *Town Square*. Construction period impacts are addressed in Section 3.21. The operational phase will begin upon completion of *Town Square* and will continue indefinitely. The operation of *Town Square* will have important economic impacts despite the mainly residential nature of the development. Residents will generate economic impact through their spending in the local economy, while the operational economic impact of *Town Square* itself will be determined chiefly by the jobs and businesses to be based on-site in the stores, offices, and garage.

Methodology: Economic impact is the umbrella term for three subsets of specific impacts:

- *Jobs:* employment levels sustained by an entity's current existence or anticipated to be created by investment, such as construction. Jobs are annual, full-time equivalent (FTE).

- *Earnings:* salaries and wages paid to employees (not corporate earnings or net profit). Construction phase earnings are spread over the life of the project and not repeated. Operational earnings are considered ongoing, annual impacts.

- *Output:* the sum of economic activity associated with the development. In the case of the construction phase, output is the total development budget. In the operational phase, output is a projection of the sum of all operations expenditures for the businesses operating out of *Town Square*.

The three types of economic impacts are calculated as direct, indirect, and total:

- *Direct Impact:* the annual amount of money put into the economy and jobs created by the project itself, in this case *Town Square*. Direct jobs impacts include, for example, construction workers in the construction phase and retail workers during the operational phase.

- *Indirect Impact:* the continuing annual flow of money as transactions take place after initially being put into the economy, sometimes informally referred to as the "ripple effect". In order to calculate indirect impact, multipliers were used specific to the Connecticut economy from the RIMS II Regional Input-Output Modeling System, an economic model developed by the U.S. Department of Commerce's Bureau of Economic Analysis (1997 edition), which is widely used in measuring indirect impacts. Indirect annual impact is the product of the direct impact times the appropriate industry multiplier.

- *Total Impact:* the sum of the direct and indirect calculations for the three types of economic impact (output, earnings, and jobs).

Methodologies for calculations of economic impact were made in accordance with *Development Impact Assessment Handbook* (Robert W. Burchell, Urban Land Institute, 1994).

Operational Phase Impact Findings: Once *Town Square* is operational, its economic impact will be largely a function of the operations of jobs created by its business tenants. This analysis does not include the residential component of the development in direct impact calculations, on the assumption that the employed residents will go to jobs based elsewhere in Hartford and the region. However, residents' projected consumption of goods and services is factored into the calculation of indirect employment impacts, since retail and service jobs will be created in the area based on the new *Town Square*-based demand source. Table 13 summarizes the direct, indirect, and total annual Output, Earnings, and Jobs anticipated from the Proposed Action compared to existing conditions, demonstrating a net positive impact in all three categories. Impacts are described in brief for each category as follows:

Output (Expenditures): Net disposable expenditure projections based on projected earnings will aggregate $11.1M. Of this amount, it is anticipated that 40.3 percent, or $4.5M will be spent on retail goods and $6.6M on other types of consumption. Business operations at *Town Square* will generate an estimated $31.6M in direct annual output and $90M in total output.

Earnings: Annual total gross direct earnings arising from employment at *Town Square* are projected at $13.4M. Much of the spending associated with these earnings will occur locally.

Jobs: Direct FTE jobs will be generated from retail (140 jobs), office (279 jobs), and garage operations (2 jobs). Presently the HCC mall has 66,179 SF leased and operational, which translates into 165 FTE jobs. The *Town Square* redevelopment will create 421 FTE jobs as fully occupied, an increase of 256 jobs. Indirect retail jobs (597) will be generated from

office, garage, and retail output as well as from *Town Square* apartment residents' consumption expenditure in Hartford and the region.

Table 13: Net Changes in Annual Output (Expenditures), Earnings, and Jobs Associated with Town Square Operational Phase (Proposed Action) vs. Existing Conditions

	Town Square Operational	Existing Condition	Net Impact
Output			
Direct	$31,632,179	$7,446,792	$24,185,387
Indirect	$58,772,446	$13,953,799	$44,818,647
Total	**$90,404,625**	**$21,400,591**	**$69,004,034**
Earnings			
Direct	$13,392,740	$3,946,800	$9,445,940
Indirect	$8,105,498	$2,270,199	$5,835,299
Total	**$21,498,238**	**$6,216,999**	**$15,281,239**
Jobs			
Direct	421	165	256
Indirect	597	147	450
Total	**1018**	**312**	**706**

Summary: The operational phase of Tower Square will result in an estimated net increase of 706 total jobs (256 direct and 450 indirect), net increase in total annual output of $69,004,034 ($24,185,387 direct and $44,818,647 indirect) and a net increase in total annual earnings of $15,281,239 ($9,445,940 direct and $5,835,299 indirect).

Fiscal Impacts

The No-Action Alternative would result in a continuation in the trend of decreasing property tax revenue from the existing property. Property tax revenue from the HCC has been dropping over the past five years. Total assessed value in 1999 was $10,572,800, with tax assessed at $571,460. By 2002, the total assessed value was $5,250,000 and the tax assessed dropped to $319,505. If this trend were to continue, there would be a direct adverse fiscal impact from the No-Action Alternative. There are currently no residents at the site, and consequently, no personal property tax revenue from automobiles.

The Proposed Action will have no adverse impact on tax revenues to the City of Hartford. The real estate property taxes on the *Town Square* development will remain at a fixed rate of $500,000 per year for 20 years as part of the redevelopment agreement reached among the state, City of Hartford and NIC. While this is somewhat less than past years (1999) tax assessment, it represents constant, predictable tax revenue as opposed to the decline in tax revenue anticipated under the No-Action Alternative. Following the 20-year fixed tax rate period, the tax revenue from the *Town Square* development will be assessed at then current City rates and is anticipated to rise as the value of the property increases.

The Proposed Action is anticipated to yield tax revenues from assessments on vehicles owned by *Town Square* residents in the range of $295,000 to $442,000 annually. This estimate was made using the following assumptions:

- The City of Hartford has a tiered tax structure in which vehicles are currently taxed at 52.92 mills
- Tax is figured on 70 percent of assessed value
- There will be 262 apartments at *Town Square* and it was assumed there will be 95 percent occupancy on average, or 249 households in residence.
- Average vehicle ownership for *Town Square* will be 1.6 per vehicles household.
- The average household income of the target market is $80,300, an income level able to afford relatively high-end vehicles.
- Most *Town Square* residents will be new residents to Hartford, such that new tax revenues will be captured.

From the foregoing information, a range of anticipated fiscal impact was developed based on a range of average car values from $20,000 to $30,000, weighted to the high end of prevailing car values in the marketplace. Table 14 summarizes the fiscal impact anticipated in terms of automobile taxes as follows:

Table 14: Projected Range of Automobile Tax Revenue for the Proposed Action

	Total of 398 Vehicles		
Average Assessed Value	$20,000	$25,000	$30,000
70% Assessed Value	$14,000	$17,500	$21,000
Hartford Vehicle Mill Rate	52.92	52.92	52.92
Average Tax/ Vehicle	$740.88	$926.10	$1,111.32
Total Tax	**$294,870**	**$368,588**	**$442,305**

These findings reflect that the Proposed Action is anticipated to have a beneficial impact on the City of Hartford in terms of both real property taxes and vehicle taxes.

3.8.3 Cumulative Impacts

The No-Action Alternative will have no cumulative impacts on the economy of the City of Hartford.

The Proposed Action in association with the other planned and programmed projects in Hartford can be anticipated to have a beneficial cumulative impact on economic conditions in the City of Hartford. The combined impacts of these projects are expected to be increased resident population, increased jobs, and increased number of tourists visiting the City. This will increase spending at commercial outlets, encourage growth and stability in Downtown businesses, and expand employment. The resultant fiscal impact will be an increase in overall assessments and increased tax revenue.

3.8.4 Mitigation

As no adverse impacts to the economy are anticipated from the Proposed Action, no mitigation is proposed.

3.9 WATER QUALITY

3.9.1 Existing Setting

There are no rivers, streams, or intermittent watercourses within the subject site. The nearest watercourse is the Connecticut River, approximately one half mile east of the project site. According to the DEP's GIS Water Quality Standards and Criteria database, groundwater underneath the project site and vicinity is classified as "GB" (*Environmental GIS Data for Connecticut, 2003 Edition*, DEP). Groundwater quality of GB areas are assumed to be degraded due to a variety of pollution sources and are assumed unsuitable for human consumption without treatment. Such waters are usually within a historically highly urbanized and/or industrial area and where public water supply service is available. GB designated uses include industrial process water and cooling waters, and base flow for hydraulically connected surface water bodies. There are no public water supply wells. Given these conditions, there are no existing sensitive surface or groundwater sources that could be affected by the Proposed Action.

As discussed in detail in Section 3.19 *Public Utilities and Services,* the existing interior garage stormwater system drains into an oil/water separator that discharges to the sanitary sewer system.

3.9.2 Direct and Indirect Impact

Any developed site in an urban location is a potential source of contaminated runoff. However, since the Proposed Action does not increase the footprint of impervious surface nor introduce new sources of contamination, it is not anticipated to result in any changes to surface or groundwater conditions. The quality and quantity of stormwater runoff collected from the site under the Proposed Action would be similar to current conditions. The stormwater management system for the Proposed Action, discussed in detail in Section 3.19 *Public Utilities and Services*, will be an upgrade of the current aged system. The water quality of stormwater runoff discharged from the site after construction of the Proposed Action is likely to be similar to the quality of runoff from the existing site. Groundwater will not be affected. As such, no direct or indirect adverse impacts to surface water or groundwater quality are anticipated with either the No-Action Alternative or the Proposed Action.

No change will occur to the existing interior garage stormwater system and separator.

3.9.3 Cumulative Impacts

There are no cumulative adverse impacts anticipated to water quality with either the No-Action Alternative or the Proposed Action.

3.9.4 Mitigation

Since no adverse direct or indirect impacts to water quality are anticipated, no mitigation is proposed. However, NIC will be responsible for incorporating techniques to enhance stormwater management from the parking garages as part of project implementation. To

reduce potential off-site impacts of stormwater runoff, the proposed new interior parking garage drainage system will incorporate an oil/grit separator, which will discharge into the sanitary sewer system. Additionally, relatively clean roof drainage will be segregated from the more polluted parking area drainage and discharged to the stormwater system.

Construction-period precautions will be implemented to minimize potential erosion and sedimentation effects from demolition and excavation activities.

3.10 HYDROLOGY AND FLOODPLAINS

3.10.1 Existing Setting

The subject site is located within the Park River subregional watershed, which is part of the much larger Connecticut River watershed (*Environmental GIS Data for Connecticut, 2003 Edition*, DEP). There are no Federal Emergency Management Agency (FEMA) designated floodplains within the subject site. The entire project site is covered by impervious surfaces (i.e., pavement, buildings, sidewalks, etc.). The existing stormwater management for the project site primarily utilizes a piped collection system that ultimately discharges into Connecticut River.

According to the *Geotechnical Design Report* (GZA GeoEnvironmental, Inc., July 2003), the depth to bedrock varies on the HCC site. Under the proposed residential tower (Asylum and Trumbull Streets), bedrock is approximately five feet below the existing floor slab, providing limited opportunity for groundwater flow. The report cited that depth to groundwater can vary greatly from 20 to 30 feet in elevation and there is no well-established water table within bedrock. Recent bore drillings did not encounter groundwater. A more detail discussion on the site's stormwater management system is in Section 3.19 *Public Utilities and Services.*

3.10.2 Direct and Indirect Impact

Since there are no designated FEMA floodplains, no direct or indirect impacts to floodplains are anticipated with either the No-Action Alternative or the Proposed Action. The Proposed Action will require the removal of existing structural fill and excavation into bedrock for the new foundation and two elevator pits for the residential tower. Due to the low permeability of the subsurface fill and the overall low regional water table within the bedrock, the placement of proposed foundation and elevator pits will not impose a significant impact to groundwater hydrology of the subject site. The existing drainage system will most likely need to be replaced to intercept groundwater.

3.10.3 Cumulative Impacts

There are no cumulative adverse impacts anticipated for hydrology or floodplains.

3.10.4 Mitigation

As no significant adverse impacts to hydrology or floodplains are anticipated, no mitigation is proposed.

3.11 WETLANDS

3.11.1 Existing Setting

According to the *Advance Connecticut Soil Survey Database* (USDA NRCS and DEP, 1995) and site observations, there are no wetlands (hydric, fluvial or alluvial soils) within or adjacent to the subject site.

3.11.2 Direct and Indirect Impact

Since the HCC site contains no wetland soils, there will be no direct or indirect wetland impacts.

3.11.3 Cumulative Impacts

There are no cumulative impacts to wetlands anticipated.

3.11.4 Mitigation

As no adverse impacts to wetlands are anticipated, no mitigation is proposed.

3.12 FLORA/FAUNA/HABITATS/THREATENED AND ENDANGERED SPECIES

3.12.1 Existing Setting

The project site is covered in buildings, asphalt, and concrete. This setting provides very little in the way of ecological diversity and wildlife habitat. Flora (plant life) is rare except for occasional urban street trees. The existing planters along Trumbull Street and Asylum Street contain approximately 31 shrubs and flowering trees in addition to some ground cover (NIC communication, November 5, 2003). Fauna (animals) that may occur in the project study area would be those typical of urban settings, such as squirrels, pigeons, rats, and mice. However, there have been no rodent control problems reported at the HCC.

The DEP Natural Diversity Data Base has indicated there are records of the peregrine falcon (*Falco peregrinus*), a state and federal endangered species, nesting on the Travelers' Tower in downtown Hartford (DEP letter dated August 4, 1999). This is a specific site used year after year for nesting. No other downtown Hartford buildings are known to harbor nest sites.

3.12.2 Direct and Indirect Impact

The No-Action Alternative will be a continuance of existing conditions and no direct or indirect impacts to flora, fauna, or habitats are anticipated from this alternative.

The design plans for the Proposed Action include the removal of all of the planters with street trees and shrubs along Trumbull and Asylum Streets and replacement with a new streetscape and landscaping plan that includes regularly spaced street trees. The landscaping plan calls for 10 flowering trees, 58 shrubs, and groundcover plants in various beds along Trumbull Street, in the residential garage courtyard, and within existing planters on Ann Street. Since no unusual ecological or habitat values are associated with the existing streetscape or street trees, the Proposed Action will have no anticipated impacts on flora and fauna.

Since the Travelers' Tower is already surrounded by tall towers that do not affect peregrine falcon nesting activity, the addition of the *Town Square* tower, at a further distance than other towers, is not anticipated to have any direct or indirect impacts on the behavior or nesting success of this species. The DEP (scoping comments dated April 4, 1999) has recommended that if there was an opportunity to place a nesting box for peregrine falcons on the proposed *Town Square* tower, the DEP Wildlife Division would help coordinate this opportunity with the owner and developer.

3.12.3 Cumulative Impacts

There are no cumulative impacts to flora, fauna, habitats, or endangered species anticipated.

3.12.4 Mitigation

As no significant adverse impacts to flora, fauna, habitats, or endangered species are anticipated, no mitigation measures are proposed. However, NIC will provide a site and box for the location of a peregrine falcon nesting box in consultation with DEP.

3.13 SOILS AND GEOLOGY

3.13.1 Existing Setting

According to the *Geotechnical Design Report* (GZA GeoEnvironmental, Inc., July 2003), only structural fill and bedrock remains below the existing HCC structure, with some small amount of glacial till in the southwestern portion. The fill was assessed to be medium dense to very dense, red-brown, medium to fine sand, with traces of silt and fine gravel. The shallow depth to bedrock and the presence of structural fill indicates that native soils do not occur and were most likely excavated for the development of the HCC. According to the *Phase I Environmental Site Assessment* (GZA GeoEnvironmental, Inc., 2001), there is no evidence or indication of soil contamination.

3.13.2 Direct and Indirect Impact

The No-Action Alternative will be a continuance of existing conditions. No disturbance to soils or geology would take place.

The Proposed Action will require the removal of existing structural fill and excavation into bedrock for the new foundation and two elevator pits for the residential tower. Since the fill is non-native, there are no anticipated direct or indirect impacts to existing soil conditions. The Phase I did not find any recognized hazardous environmental conditions and did not recommend any soil testing. Although it is not anticipated, it is possible in an urban environment to discover contaminated soils during foundation excavation.

It is anticipated that the proposed residential tower's foundation and elevator pits will require excavation into the bedrock of a few to about 10 feet for the elevator pits. Since the existing basement floor is already close to the bedrock, a relatively small amount of bedrock needs to be removed. To avoid potential damage to structural elements that will be preserved from the existing HCC, limited blasting is planned. It is anticipated that other means of bedrock excavation will also be employed, such as chemical splitting, chiseling, jack hammering, etc.

Since the Proposed Action will be constructed in an urban setting with previously disturbed soils and geology, no adverse direct or indirect impacts on natural soils or geologic formations are anticipated.

3.13.3 Cumulative Impacts

There are no cumulative impacts to soils or geology anticipated.

3.13.4 Mitigation

As there are no long-term soil or geologic impacts anticipated, no mitigation proposed.

3.14 CULTURAL RESOURCES

3.14.1 Existing Setting

Archival research of files located at the Connecticut Historical Commission (CHC) was completed to identify all properties listed on or are eligible for listing on the National Register of Historic Places (National Register) that are located within the area of potential effect (APE) for the Proposed Action. The APE was estimated to encompass the HCC and a one city block perimeter around the facility on all sides. Maps were also obtained from the City of Hartford Planning Department that identified all National Register Districts and individual properties. A windshield survey was conducted on September 12, 2003 to verify archival research and to assess potential impacts to the visual setting of historic properties from the Proposed Action. Historic properties and districts determined to exist within the APE are shown in Figure 8.

Figure 8: Cultural Resources

A Stage I Site Review -- an evaluation of the historic and archaeological potential of a project site -- was completed by the State Historic Preservation Office (SHPO) for the HCC in July of 1999 and the following determination was made: *It is expected that a plan for this site would not be inimical to (is consistent with) the planning program of this agency.* Agency coordination with the SHPO was initiated for this EIE by a letter dated September 2, 2003 (see Appendix B) and is ongoing.

The following three historic districts were found to be within the APE:

- The Ann Street Historic District is west of the Civic Center block and includes St. Patrick and St. Anthony's Roman Catholic Church located at the corner of Church and Ann Streets. This brownstone church was built in 1829. The district, which is listed on the National Register, also includes a number of three-story brick commercial buildings dating from the 1890s, including the Law Tribune Building at 201 Ann Street.

- The Goodwin Block is located on the south side of the Civic Center block between Ann and Haynes Streets. It consists of a three-story, brick, commercial block that is listed on the National Register of Historic Places. The block includes the Goodwin Hotel at One Haynes Street, with an elaborate Italianate-style façade dating from 1881.

- The Pratt Street Historic District is located on the eastern side of Trumbull Street, lining both sides of Pratt Street. This district is listed on the National Register of Historic Places and includes the structures located at 31-101 and 32-110 Pratt Street and 196-260 Trumbull Street. These resources all are commercial buildings that have all been altered to some degree to accommodate modern developments. They range in building dates from between 1875 and 1949.

The following four properties are located within the APE and are individually listed on the National Register of Historic Places:

- The Charter Oak Bank Building, located at 114 -124 Asylum Street, is a multi-storied, brownstone structure dating from the latter half of the nineteenth century.

- The Dillon Building, also known as the Singer Building, is located at 69-71 Pratt Street. It is an excellent local example of Beaux-Arts architecture and was built by architect Isaac A. Allen, circa 1880.

- The Stackpole, Moore and Tryon Building, located at 105-115 Asylum Street, was built circa 1875, also by architect Isaac A. Allen Jr. It stands as a fine surviving example of the kind of department store once located within Hartford.

- Christ Church Cathedral, located at 955 Main Street was built circa 1830 in the Gothic Revival Style.

3.14.2 Direct and Indirect Impact

As the No-Action Alternative will be a continuance of existing conditions, there will be no direct or indirect impacts to cultural resources.

The Proposed Action will be limited to the existing HCC footprint, so there will be no direct impacts anticipated to surrounding historic or archeological resources. CEPA also requires an evaluation concerning the "disruption or alteration" of a historic, architectural or archaeological resource or its setting. The addition of a 36-story tower into the skyline of Hartford will change the visual setting of the APE, particularly in the Goodwin Block at the corner of Haynes and Asylum Streets, but will not constitute "a disruption or alteration of a historic, archaeological, cultural or recreational building, object district or its surrounding." The existing HCC building is not consistent with the historic context of the National Register sites and districts in the vicinity, yet there is already a substantial number of high-rise structures visible from these resources, including City Place at 185 Asylum Avenue (38 floors), Goodwin Square at 225 Asylum Avenue (30 floors), Hilton Hotel at 315 Trumbull Street (21 floors), and City Place on Trumbull Street (18 floors).

A shadow and wind study, which simulated the shadow and wind that would be created by the redevelopment and affect the surrounding land, was conducted for the Proposed Action on June 23, 2002 and October 23, 2002 (Childs, Bertman, Tseckares, Inc.). This study demonstrated that the proposed *Town Square* residential tower would not significantly alter the existing patterns of shade, shadows, and wind created by the existing surrounding buildings.

Coordination from SHPO (letter dated October 1, 2003) states that the SHPO "affirms its previous determination that the demolition of all or part of the current retail and office space will have no effect on cultural resources pursuant to CEPA". However, due to the proximity of the site to properties on the State and National Registers of Historic Places, SHPO will require review of the project design for the new construction to evaluate potential indirect impacts.

3.14.3 Cumulative Impacts

There are no cumulative impacts to cultural resources anticipated with either the No-Action or the Proposed Action.

3.14.4 Mitigation

As there are no significant direct or indirect effects anticipated to cultural resources, no mitigation is proposed. Coordination with SHPO will be continued by NIC to afford an opportunity for its review of the final design and maximize the sensitivity of the new buildings and streetscape plan to their historic context.

3.15 SOLID WASTE AND HAZARDOUS MATERIALS

3.15.1 Existing Setting

Relevant information about the history of release of hazardous materials, the presence of underground storage tanks, and solid waste handling practices at the project site was extracted from two reports prepared for NIC by GeoEnvironmental, Inc. (GZA):

- *Phase I Environmental Site Assessment, Hartford Civic Center, 225 Trumbull Street, Hartford, Connecticut* (GZA, April 2001)
- *Phase I Site Assessment Addendum Letter, Hartford Civic Center, Hartford, Connecticut* (GZA, February 20, 2002)
- *Investigative Survey for Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP) at the Hartford Civic Center, Hartford, Connecticut* (TRC, December 11, 2000)

GZA based the Phase I Site Assessment on their review of available historical and environmental records from local, state, and federal agencies, visual observations of the surface of the site and adjacent properties, and interviews. Results from the site assessment are described below.

Hazardous Materials

According to the Phase I Site Assessment, hazardous wastes are not generated by activities at the HCC site. GZA concluded that conditions at the HCC site do not constitute any "Recognized Environmental Conditions" as defined by American Society of Testing Materials standards and did not recommend any soil or groundwater testing.

The report noted that the Ritz Camera shop generated wastewater discharges from photographic processing chemicals, but that a search of the 2000 DEP permits database indicated that the Civic Center location of Ritz Camera was not registered and did not have a DEP General Permit for discharging minor photographic processing wastewater to the sanitary sewer.

Polychlorinated Biphenyls (PCBs): The Phase I reported that a vault containing housing electrical transformers owned by Connecticut Light & Power (CL&P) is located one level below street level at the P-1 level of the existing parking garage. It was reported that the transformer oil contained PCB oil at concentrations less than the 50 parts per million (ppm) level defined under federal law for the classification of non-PCB equipment. Following a transformer fire on September 28, 2001, NIC commissioned an addendum to the Phase I to determine the potential for environmental conditions created by the fire. In the meantime, a minor release (less than one gallon) of non-PCB transformer oil (non-PCB bearing) occurred in October 2001. In the 2002 Phase I addendum, GZA recommended that no further action be taken, but recommended further testing of concrete surfaces in the transformer room sump if future building renovations proposed demolition.

Above-Ground and Underground Storage Tanks: According to the Phase I, the Coliseum has one inside 660-gallon above-ground storage tank (AST) of diesel fuel for an emergency

generator. This tank replaced a 2,500-gallon underground tank, which had been installed in 1974. A DEP memorandum dated August 13, 1993 indicated that the "tank contents were pumped and transferred to the 660 gallon AST" and the "tank was rinsed and samples were taken of soil under the tank to determine if any release had occurred [which] indicated that no contamination was present and the UST was abandoned in place."

Asbestos-Containing Materials: The TRC report identified asbestos containing materials (ACM) in end cap insulation on fiberglass insulated lines, fire doors, mastics behind some mirrors and flooring, roof flashing, roof patching, floor tile and associated floor tile mastic.

Lead-Based Paint: Buildings built before 1978 often have some lead-based paint (LBP) present. The TRC report noted that 56 out of 269 measurements indicated lead to be present. The highest readings were found on structural beams, isolated doorframes, ceramic wall tiles (not painted), radiator connectors, and the wall at the base of a stairwell. Of those 56 detectable lead measurements, 12 would have been classified as toxic by the EPA and U.S. Department of Housing and Urban Development. The U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Lead Exposure in Construction Standard does not distinguish between toxic and non-toxic levels of lead. Therefore, all measurements at or above the detection level are relevant in regard to the need for lead abatement.

Solid Waste

The Phase I noted that solid waste generated at the HCC site consists of typical commercial, office, retail, and restaurant refuse which is disposed in dumpsters adjacent to the two loading docks within the parking garage levels of the facility. Grease is collected in a container located at the Ann Street loading dock, and disposed offsite.

3.15.2 Direct and Indirect Impact

The No-Action Alternative would be a continuance of existing conditions. As such, no direct or indirect impacts to hazardous materials management would be anticipated.

In relation to the Proposed Action, the following impacts may be anticipated:

Hazardous Materials

The primary impact related to hazardous materials from the Proposed Action will be the generation of debris from the demolition and renovation of the retail and office facilities. Hazardous materials released or used during construction can pose health hazards to construction workers as well as others working daily and living in the area. No other substantive impacts are anticipated. Construction period impacts relative to hazardous materials are addressed in more detail in Section 3.21.

While not yet specifically identified for the HCC, throughout the facility's equipment and systems could be dispersed hazardous wastes that fall under the classification of universal waste. Universal waste, which may contain mercury, lead, Freon, and other hazardous

constituents, must be contained, labeled, transported, and managed in accordance with Section 22a-449(c)-113 of the RCSA. It will be segregated from the demolition debris waste stream and recycled. Such wastes include:

- Batteries (e.g., for emergency lights and security systems)
- Sprinkler system contacts
- Fluorescent lamps including PCB ballasts
- Cathode ray tubes (e.g., computer monitors)
- Electronic equipment (e.g., circuit boards)
- Air conditioning equipment
- Gas regulators
- Thermostats

Solid Waste

The primary impact to the solid waste system from the Proposed Action will be the generation of debris from the demolition and renovation of the retail and office facilities. These construction period impacts relative to solid waste management are addressed in Section 3.21.

The Proposed Action includes renovation of some of the retail and office space for uses similar to existing conditions and the addition of a 262-unit residential tower. Therefore the primary long-term impact on solid waste will be the addition of the residential units. Multiple housing units generate 2.7 pounds solid waste per resident per day (Corbitt, 1990). Assuming the retail and office portions will generate similar volumes of solid waste as the current facility, the project will generate an additional 323 tons/year based on an assumption of 2.5 residents per unit. This represents a minor adverse impact.

3.15.3 Cumulative Impacts

No cumulative impacts related to hazardous materials are anticipated. The Proposed Action in association with the planned and programmed projects noted earlier can be anticipated to collectively increase the volume of solid waste generated in the City of Hartford over time. The increased waste stream will result from the increase in resident population as well as growth in business activity, projected growth in tourism, and projected growth in attendance at cultural and sporting events in the region.

3.15.4 Mitigation

A solid waste management plan for *Town Square* (BSC Group, 2002) proposed by NIC includes practices that will reduce the generation of solid waste. Residents, retail tenants, and non-retail tenants will be asked to separate trash from recyclables. A designated recycling room will be on the main level for residents. The plan proposes three additional trash/recyclables collection points for retail and non-retail tenants.

3.16 USE/CREATION OF PESTICIDES, TOXICS OR HAZARDOUS MATERIALS

3.16.1 Existing Setting

The existing HCC neither creates nor stores pesticides, toxics, or hazardous materials. A third party contractor applies some pesticides. Commercial pesticide control is applied 12 times per year for rats, mice, cockroaches, ants, and silverfish. Areas of coverage include exterior planters, docks, maintenance lockers, storage and refuse areas, and lobby, mezzanine, and custodial closets. Horticultural services include the use of small quantities of insecticides.

The presence of hazardous materials in small amounts is incidental to mechanical and electrical equipment such as heating, cooling, lighting, fire protection, security, and other systems typical of a facility of its kind. Items potentially containing small amounts of hazardous materials include the following:

- Batteries (e.g., for emergency lights and security systems)
- Sprinkler system contacts
- Fluorescent lamps including PCB ballasts
- Cathode ray tubes (e.g., computer monitors)
- Electronic equipment (e.g., circuit boards)
- Air conditioning equipment
- Gas regulators
- Thermostats

3.16.2 Direct and Indirect Impact

The No-Action Alternative would be a continuance of existing conditions. As such, no direct or indirect impacts to toxic and hazardous materials management would be anticipated.

The construction of the Proposed Action would involve the installation, upgrade or reconstruction of mechanical and electrical systems to service the *Town Square* development. These systems will be grander in scale than what presently occurs at the HCC, but will be of similar structural and material components, with a similarly low risk of exposure or health issues. There may be minor increased applications of pesticides due to the addition of residential usage at the site. However, there is expected to be no net increase in the rate of pesticide use per square foot of building space. As such, no significant direct or indirect impacts relative to toxic and hazardous materials management are anticipated with this alternative.

3.16.3 Cumulative Impacts

No cumulative impacts associated with pesticides or toxic and hazardous materials are anticipated for either the No-Action Alternative or the Proposed Action.

3.16.4 Mitigation

Since no impacts are anticipated in relation to toxic or hazardous materials, no mitigation is proposed.

3.17 AESTHETIC/VISUAL EFFECTS

3.17.1 Existing Setting

The HCC complex is primarily visible from street level and from the towers of other downtown buildings. Downtown Hartford in the vicinity of the HCC is heavily urbanized. Buildings, roadways, sidewalks, and surface parking lots are the dominant features. Hard paved surfaces and building façades are the norm, and landscaping is minimal. Visual elements are primarily architectural, offering an array of buildings with different styles, heights, and materials.

The existing HCC is a large footprint (one large city block) comprised of low, flat-topped structures. The retail/commercial buildings and parking garage of the HCC, which wrap around the coliseum, are four to six stories high with a tan concrete façade, while the brown coliseum rises several stories higher in a box-like fashion. Along Trumbull and Asylum Streets, the HCC façade is concrete and glass with banked landscape slopes and series of steps adjoining the sidewalks, somewhat fortress-like (Figure 9). The west and northern façades are the forbidding walls of the coliseum, while the existing parking garage is below grade and behind the vacated food court on Asylum Street.

Figure 9: Existing Hartford Civic Center Mall View
View from Corner of Trumbull and Asylum Streets

The HCC is surrounded by a mix of historic structures of three or four stories and modern buildings with towers 15-40 stories high. The historic buildings are of red and dark red brick, brownstone, or yellow brick, and have visually interesting and rich façades including stonework, lamps, awnings, architectural entries, window trims, and decorative soffits.

Alongside and behind these diminutive buildings are the smooth façades of the modern towers of stone and glass or metal and glass, in pink, gray, and silver. These buildings provide a vertical-edged streetscape of doors and windows similar to most of Downtown. Within this context, the HCC is unusual in terms of height/mass and style. The walkways connecting the HCC to City Place and to CIGNA are of visual interest but do not match the style or materials of either side. From street level, the HCC blends in visually because the vicinity is already very diverse and variable in scale, style, height, form, color, and texture. From an elevated viewpoint, however, the HCC's expansive flat roofs are highly visible and therefore distinctly contrast with the more vertical and architectural urban fabric of Downtown.

3.17.2 Direct and Indirect Impact

The No-Action Alternative would be a continuance of existing conditions. As the existing HCC does not make a positive contribution to neighborhood aesthetics and could be anticipated to present a predominantly vacant site for the foreseeable future, this alternative would have an incremental adverse effect on aesthetics.

The Proposed Action would not result in a change in the HCC's overall footprint, nor to the Coliseum component. Visual changes would occur to the Trumbull Street and Asylum Street façades (Figures 11 and 12), since one of the main purposes of the project is to provide direct street level access and visibility to retail stores, unlike the current situation. The project would provide windows and entry doors into retail stores at sidewalk level along both streets, including under the residential tower, and access from both streets, one each to the existing and proposed parking garages.

Figure 11: Town Square Rendering
View of Trumbull Street Looking South
Source: Childs.Bertman.Tseckares, Inc and axyz.

Figure 12: Town Square Rendering
Corner of Asylum and Ann Streets Looking Down Asylum Street
Source: Childs.Bertman.Tseckares, Inc. and axyz

The renovation of the HCC follows modern international design forms used widely in urban settings. The street-level retail façades along Trumbull Street are mainly glass, the grand entry at the corner of Trumbull and Asylum Streets is glass (Figure 13), and there are large glass windows on the second-story level. The glass will allow a visual "transparency" to the retail goods and activities inside of the building that will be visually interesting to passers-by. At the same time, the glass surfaces will pick up and reflect the colors and forms of the surrounding buildings, helping to visually blend the building within the block. The glass, granite, and metal materials proposed would be similar to the surrounding newer buildings.

Figure 13: Town Square Rendering
Corner of Trumbull and Asylum Streets
Source: Childs.Bertman.Tseckares, Inc. and axyz

However, the new HCC will be a unique design distinctly different from the surrounding architecture. Rather than being one massive uniform structure like the current HCC, it will have distinct "building blocks" that vary in form and color along Asylum and Trumbull Streets, similar to the way many urban streetscapes have evolved. The use of the building blocks provides the building with a more human and welcoming scale. The Trumbull Street façade incorporates a central atrium entryway for internal and coliseum access, with a visible entry marquis for easy recognition. The new façades will be visually diverse compared to the uniform blocky HCC, which should be more visually interesting, yet compatible in scale and materials to the surrounding diverse urban fabric. Proposed street trees and shrubs (more than are currently there) along both faces would soften the hard urban materials, reduce glare, and provide further visual interest.

The other major visual change would be the addition of the residential tower of approximately 36 stories across from City Place. The *Town Square* tower would be of a similar scale and height as other Downtown buildings, although not as tall as the City Place office tower (see Figure 14). The modern design of the tower, with rectangular shape and regularly spaced windows, would give it a similar form to surrounding towers, with which it should be compatible. The addition of the tower would bring a more vertical dimension to the HCC block, consistent with the blocks south and east of the HCC. While the tower may block certain views to the north from City Place, it would also shield from view some of the expansive flat roofs of the coliseum complex and add another element of interest to the Hartford skyline. The visual changes brought about by the project are therefore considered positive, overall.

Figure 14: Town Square Rendering
Oblique Aerial View of Downtown Hartford
Source: Childs.Bertman.Tseckares, Inc. and axyz.

3.17.3 Cumulative Impacts

No cumulative impacts are anticipated relative to aesthetics for either the No-Action Alternative or the Proposed Action.

3.17.4 Mitigation

As no adverse impacts to aesthetics are anticipated, no mitigation is proposed.

3.18 ENERGY USE AND CONSERVATION

3.18.1 Existing Setting

The existing HCC uses energy primarily to light and heat/cool the mall area and parking garages. Energy sources associated with the mall activities are primarily electricity and fossil fuels. Utilities providing energy service in the area include CL&P, Connecticut Natural Gas (CNG) and the Hartford Steam Company.

3.18.2 Direct and Indirect Impact

The No-Action Alternative represents a continuation of existing energy demand and would have no adverse effects on energy use and conservation.

The Proposed Action includes the construction of 262 new residential units at the site. These new units in association with the new area of active commercial space will pose an increase in energy demand at the site above existing conditions. Utility providers estimate that there is adequate energy supply to meet this increased demand. Furthermore, the design of the Proposed Action has utilized the criteria set forth by the Connecticut State Building Codes and its Supplements, which requires the use of energy efficient design and operational practices.

3.18.3 Cumulative Impacts

The Proposed Action in association with the planned and programmed projects noted earlier can be anticipated to collectively represent an increase in energy demand in the City of Hartford over time. The increased energy demand will result from the anticipated change in Hartford to a 24-hour a day urban community with new resident populations as well as growth in business activity, projected growth in tourism, and projected growth in attendance at cultural and sporting events in the region.

3.18.4 Mitigation

Design and completion of the Proposed Action will include a variety of measures to conserve power. The residential portion of the development will incorporate use of Energy Star rated dishwashers. Energy efficient motors will be utilized for mechanical equipment.

The apartments will utilize type T-8 and compact fluorescent lighting with electronic ballasts for fixed lighting installed in locations such as kitchens, under counter illumination and general bathroom lighting. The base building with the retail and office space will also incorporate both T-8 and compact fluorescent lighting with electronic ballasts. These will be used in conjunction with a programmable switching system capable of controlling 'on' and 'off' operation of the lighting on fixed and variable schedules. The parking garage will include new metal-halide lighting with energy-savings ballasts. The public sector of the garage will be equipped with switching capability that will enable areas not fully utilized to be switched off. However, select lighting fixtures used for emergency egress will remain on at all times and in all areas for emergency use. Storage and office spaces within the facility will be equipped with motion sensors that will shut off lighting when the spaces are unoccupied.

3.19 PUBLIC UTILITIES AND SERVICES

3.19.1 Existing Setting

Existing public utilities and services that serve the HCC and/or are available in the project vicinity include water, sewer, storm sewer, natural gas, electrical, stream, chilled water, and telecommunications, and cable television.

Potable Water

The Metropolitan District (MDC) provides potable water distribution and sanitary sewage collection and disposal for the HCC site as part of its service to the City of Hartford. The MDC's water distribution system consists of upland impoundments in the Farmington River watershed totaling approximately 40 billion gallons. Water flows by gravity to two filtration plants where approximately 55 million gallons is treated daily, with a capacity of over 70 million gallons per day. Flows in the system are by gravity except for some pumping of treated water to higher elevations. All services are metered, and the population served directly is estimated to be 400,000.

The HCC site is bounded by a water distribution system in the four surrounding streets. Water mains serving the site range in size from 12 to 20 inches. All existing service to the site is expected to be retained, with the exception of a 4-inch domestic and 10-inch fire stubs/connections to the HCC mall on Trumbull Street and a 10-inch fire line on Asylum Street. The stubs will be abandoned as the new system is constructed. Existing fire hydrants are also available on the streets bounding the site.

Sanitary Sewer

The MDC's sewage collection system consists of approximately 1,200 miles of sanitary sewers serving member municipalities. Four water pollution control plants process and treat an average daily sewage flow of approximately 85 million gallons per day, with an average daily flow treatment capacity of approximately 100 million gallons per day.

The HCC site is bounded by a sanitary sewer collection system in three of the four adjacent streets with lines ranging in size from 12 to 36 inches. All existing service laterals to the site from the existing sanitary sewers are expected to be retained, with the exception of a 5-inch service lateral on Asylum Street, which will be abandoned as the new system is constructed.

Stormwater Management

The MDC also provides storm sewer facilities in the City of Hartford. The HCC site is bounded by a storm sewer collection system in the four adjacent streets. An 18-inch and a 24-inch reinforced concrete storm sewer exist in Asylum Street, with one 8-inch and one 15-inch service lateral to the site. A 36-inch brick storm sewer exists in Trumbull Street, with two 12-inch, one 6-inch, and one 4-inch laterals to the site. There are other storm sewer lines in the streets bounding the site, but these do not currently have site connections. All existing service laterals to the site from the existing storm sewers in the streets bounding the site are expected to be retained. There is also a series of catch basins in the streets bounding the project site, connected to the existing storm sewers. The system of storm sewer ultimately discharges to the Park River Conduit and the Connecticut River. The existing interior garage stormwater system drains into an oil/water separator that discharges to the sanitary sewer system.

Natural Gas, Electrical, Steam and Chilled Water

The HCC site is bounded by gas mains owned by CNG. Gas mains ranging in size from 6 to 16 inches, with laterals connected to the site, are located in Asylum Street, Trumbull Street and Church Street. The existing building service connections on Trumbull Street and Church Street are expected to be abandoned as the new system is constructed.

Underground electrical service is available on Trumbull, Asylum, Ann, and Church Streets, as provided by the CL&P. The existing electrical service to the site is provided by two networked 1500 KVA pad mounted underground transformers located in a vault off Trumbull Street. The primary service is 23 KV and the transformers provide 277-480 volt service to two 3000 AMP bus ducts.

The HCC site is also serviced by a steam and chilled water distribution system provided by the Hartford Steam Company. An existing 8-inch steam supply line and two 12-inch chilled water lines service the project site from Trumbull Street. The existing service lines will be retained and utilized for the proposed development. No additional services are required. The projected loads for steam are 31,500 pounds per hour and for chilled water 3,100 gallons per minute.

Telecommunications and Cable Television

Underground telephone service to the proposed site is available on Trumbull, Asylum, Ann, and Church Streets, and is provided by the Southern New England Telephone Company.

Underground cable television service to the proposed site is available along with the telephone service, and is provided by AT&T Cablevision. Cable telephone, digital television, and Internet service is available.

3.19.2 Direct and Indirect Impacts

The No-Action Alternative would represent a continuance of existing conditions and as such would have no direct or indirect impacts to public utilities or services. Impacts for the Proposed Action are described below.

Potable Water

A new 8-inch domestic service and a new 10-inch fire service are proposed from the existing 20-inch water main in Asylum Street.

The Proposed Action will generate an estimated average daily potable water demand of approximately 76,000 gallons per day. Fire protection demand is estimated at 1,000 gallons per minute (gpm). On March 5, 1998, a fire flow test was performed at 350 Church Street. The results of this test indicated a static pressure of 100 pounds per square inch (psi), a residual pressure of 100 psi, and a flow of 1,300 gpm. On January 22, 2002, the Hartford Sprinkler Company of West Hartford conducted an additional fire flow test on hydrants adjacent to the HCC site along Trumbull Street. The results of this test indicated a static pressure of 98 psi, a residual pressure of 94 psi and a flow of 1,330 gpm. These test results indicate that the existing water distribution system can adequately deliver the proposed potable water and fire flow requirements to the site. Furthermore, the existing water supply and treatment systems have adequate capacity to accommodate the additional flows.

All proposed modifications and/or connections to the existing water distribution system will require review and approval by the MDC prior to construction.

Sanitary Sewer

Two new 10-inch service laterals for the residential tower will be provided and an existing 8-inch service lateral will be replaced, all connecting to the 12-inch sanitary sewer on Asylum Street.

The Proposed Action will generate an average daily sanitary sewage flow of approximately 76,000 gallons. The MDC has stated (personal communications April and October, 2003) they have no concerns or requirements for upgrading and there are no capacity issues. The existing sewage treatment facilities have adequate capacity to treat these loads.

All proposed connections to the existing sanitary sewer collection system will require review and approval by the MDC prior to construction.

Stormwater Management

Two new 10-inch storm sewer service laterals for the residential tower will be provided on Asylum Street, connecting to the existing 18-inch storm sewer, and an existing 15-inch service lateral will be replaced.

The existing site is a fully developed urban parcel and is totally impervious (excluding minor landscape areas). The Proposed Action will not provide any increases in stormwater runoff. The proposed uses for the site will remain consistent with the existing facility and consist of buildings, parking areas, sidewalks and open space. Sources of pollution include maintenance practices such as road/sidewalk salting and sanding. Vehicle operations may result in the dropping of oil, grease, rust, hydrocarbons, rubber particles, and other particulate matter. No change will occur to the existing interior garage stormwater system and separator. Stormwater runoff from the proposed site is likely to have similar concentrations as those found in runoff from the existing site.

Construction activities associated with the Proposed Action have potential to impact stormwater runoff quality. Increased erosion, turbidity, and sediment transport are typically associated with construction activities. Proposed construction activities include demolition of existing facilities, excavation for curbing, sidewalk, and landscape features, and excavation associated with any necessary utility work. The transport of fine-grained material due to construction activities is the primary stormwater concern.

All proposed connections to the existing storm sewer system will require review and approval by the MDC prior to construction.

Natural Gas, Electrical, Steam and Chilled Water

New gas services will be provided on Trumbull Street and Ann Street. The anticipated gas load from the Proposed Action is 9000 CFH from Ann Street, 3000 CFH from Asylum Street, and 3000 CFH from Church Street. (Personal Communication, P. Petrossi, Energy Management Consultant, CNG, November 3, 2003)

The electrical loads for the Proposed Action are estimated to be 8000 AMPS at 480 volts for the base building, and 6000 AMPS at 208 volts for the residential tower. A new electrical service via ten 5-inch ducts shall be constructed from an existing manhole in Trumbull Street. (Personal communication, D. Noble, Account Executive, CL&P)

The Hartford Steam Company does not anticipate any problems with providing the steam or chilled water demands due to construction of this project. (Personal communication, J. Lindberg, Manager of Marketing and Sales, Hartford Steam Company, September, 2003)

Telecommunications and Cable Television

The Proposed Action will provide three 4-inch ducts to the existing telecommunications system in Asylum Street. The Proposed Action will also provide two 4-inch ducts to the existing underground cable television system in Asylum Street.

3.19.3 Cumulative Impacts

There will be no cumulative impacts to public utilities and services from the No-Action Alternative. The Proposed Action will have a small beneficial cumulative impact to utilities

and services provided by the upgrade to existing systems and addition of contemporary technology.

3.19.4 Mitigation

As no direct or indirect adverse impacts to utility services are anticipated with the exception of stormwater flows, no mitigation for water, sewer, and energy related utilities are proposed.

There will be no adverse impacts associated with water, sewer, natural gas, electrical, stream, chilled water, and telecommunications, and cable television. NIC will be responsible for incorporating techniques to enhance stormwater management from the parking garages as part of project implementation. To reduce potential off-site impacts of stormwater runoff, the proposed new interior parking garage drainage system will incorporate an oil/grit separator, which will discharge into the sanitary sewer system. Additionally, relatively clean roof drainage will be segregated from the more polluted parking area drainage and discharged to the stormwater system. After construction, periodic maintenance of the system will be conducted to ensure that the stormwater management system is operating properly. Stormwater management mitigation for the construction period is addressed in Section 3.21.

3.20 PUBLIC HEALTH AND SAFETY

3.20.1 Existing Setting

The HCC is in relatively close proximity to numerous public health facilities, hospitals, ambulance services, and safety resources including firefighting and police services. There are five hospitals in Hartford, two of which are within two miles of the site. Hartford Hospital is approximately one mile south of the HCC on Seymour Street and Saint Francis Hospital is located approximately two miles west of the HCC on Woodland Street. The fire station closest to the HCC is one and a half blocks to the southwest on Pearl Street. While the Hartford Police Department has a continuous presence in Downtown Hartford, there are no police substations in the project vicinity.

3.20.2 Direct and Indirect Impact

No direct or indirect impacts to the provision of public health and safety services are anticipated with the No-Action Alternative or the Proposed Action. The City of Hartford's existing health and safety services will be able to accommodate the Proposed Action without noticeable adverse impacts.

3.20.3 Cumulative Impacts

No cumulative impacts relative to public health and safety are anticipated.

3.20.4 Mitigation

As no significant adverse impacts to public health and safety are anticipated, no mitigation is proposed. The DEP has recommended a survey of the HCC site to identify potential rodent nesting/feeding areas. Such areas, if disturbed during construction, could be sources of disseminating rodents that could carry and spread disease. A rodent survey will be conducted by NIC and, if appropriate, an extermination plan will be developed before demolition activities commence.

3.21 CONSTRUCTION PERIOD IMPACTS

Impacts during construction of the Proposed Action are anticipated in relation to business displacements, traffic and parking, air quality, noise, economy, solid waste and hazardous materials, and public utilities and services. The nature of these impacts and proposed mitigation measures for adverse impacts are described below.

Business Displacements

The businesses now housed in the existing HCC that will return as tenants of the renovated facility will be temporarily displaced during construction of the Proposed Action. The temporary displacement of these businesses could have an adverse effect on their financial viability, result in temporary unemployment of their employees, and pose a temporary inconvenience to their patrons.

Mitigation:

- NIC will maintain coordination with the HCC tenants to avoid, minimize, and offset adverse effects to the extent possible.

Traffic and Parking

During construction there are expected to be temporary impacts to local traffic as construction vehicles and equipment access the project site. Since the HCC directly abuts four Downtown streets, construction vehicles may also temporarily obstruct traffic as they are situated to perform demolition and construction activities. Inconveniences would result from lane closures and reduced lanes or lane shifting.

The parking garage will be temporarily and periodically closed during some phases of project construction.. As there will be no businesses or other uses active at the HCC mall during construction, there will be no mall patrons wishing to park in the existing garage during that time. Drivers that use the facility for public parking with destinations other than the existing HCC mall would be inconvenienced by the need to find alternate parking either located on-street, at nearby parking surface lots, or area parking garages. Coliseum events generally take place in the evening and on weekends. As with the daytime parking patrons, Coliseum parkers who use the HCC parking garage during events may be periodically inconvenienced by the need to find alternate parking. In addition to the existing HCC parking garage, there are three other parking garages and two surface lots in the immediate project vicinity (see

Figure 4, Land Use). It is also expected that sidewalks along Trumbull and Asylum Streets and abutting the HCC will be temporarily and periodically closed to pedestrian access during the construction period for the Proposed Action. This will be a minor inconvenience as sidewalks are available on the opposite side of all streets abutting the project site.

Mitigation:

- Impacts to traffic and parking during construction will be mitigated through development and implementation by NIC of a traffic and circulation management plan. Techniques that will be employed may include construction phasing to minimize disruptions to traffic, signage, detours, directions to alternate parking locations, and employment of officers to direct traffic and assist with street crossings.

- NIC will coordinate with the City of Hartford to develop an alternative parking plan to assist users of the existing HCC garage to locate alternate parking during closures due to construction

Air Quality

Potential construction air quality impacts can arise from prolonged use of diesel powered construction vehicles. Typical diesel air quality emissions include carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter (PM_{10}). Concerns over diesel exhaust emissions has led the EPA develop new emission standards for new diesel powered vehicles beginning in 2004. However, since these standards will not begin to take effect until 2004 on new vehicles, EPA has developed the Voluntary Diesel Retrofit Program to help address pollution from diesel construction equipment and heavy-duty vehicles that are currently on the road today (EPA, 2003). Retrofit Emission Control Devices, such as diesel oxidation catalysts offer an inexpensive solution to reducing diesel emission impacts.

Mitigation:

- Contractor bid specifications will be developed for diesel powered non-road construction equipment, with the exception of cranes, to be equipped with Retrofit Emission Control Devices and/or Clean Fuel in order to reduce diesel emissions. These specifications will be based on recent requirements used by the ConnDOT and the Office of Policy and Management. In general, these specifications will apply to diesel powered non-road construction equipment with engine horsepower ratings of 60 and above and will be used on the project or assigned to the contract for a period in excess of 30 consecutive days. An agreement on compliance monitoring will be made between the DECD and NIC.

- Construction equipment will be required to comply with all pertinent state and federal regulations relative to exhaust emission controls and safety

Noise

During the demolition and construction period, continuous as well as intermittent (or impulse) noise will be experienced in the immediate project vicinity, which may be perceived by some

to be intrusive, annoying, and discomforting. This noise will be generated by construction equipment including jack hammers, rock drills, and other pneumatic tools which emit strong penetrating percussive sounds; from blasting operations; and from the daily movement of dump trucks, loaders, backhoes and other heavy equipment to and from, as well as on the actual construction site. Blasting operations for the Proposed Action are expected to be located 30 feet below the street level such that noise affects will be very limited.

The following table provides typical noise emission levels in A-weighted decibels (dBA) 50 feet from construction equipment. For comparison, every-day noise levels within urban environments typically range from 60 to 80 dBA (*Transit Noise and Vibration Impact Assessment*, DOT-T-95-16, April, 1995).

Table 15: Typical Noise Emission Levels from Construction Equipment

Equipment	Typical Noise Level (dBA) 50 Feet From Source
Air Compressor	81
Backhoe	80
Dozer	85
Generator	81
Jackhammer	88
Loader	85
Pneumatic Tool	85
Rock Drill	98
Dump Truck	85

Source: Transit Noise and Vibration Impact Assessment (DOT-T-95-16, April, 1995)

In general, noise level is reduced by 6 dBA for each doubling of distance. Thus, a rock drill with a noise level of 98 dBA at 50 feet will have a noise level of 92 dBA at 100 feet, 86 dBA at 200 feet, and so forth. Buildings and other barriers further reduce the intensity of construction noise.

Mitigation:

- Erection of temporary noise barriers around the work site where such barriers are deemed effective at buffering adjacent land uses from construction noise

- Installation and maintenance of properly functioning muffler devices on all construction equipment

- Adherence to noise standards specified in the City of Hartford's Noise Ordinance (Chapter 23 Section 3(e)(1)), and no utilization of construction machinery that exceeds noise standards outside of standard work hours set by the ordinance unless otherwise approved by the City

- Prior to production blasting, the licensed blasting contractor will perform a test blast in an area where a relatively small amount of rock excavation is required and away from existing structures and foundations. The purpose of the test blasting is to provide an

opportunity for vibration monitoring and to confirm the contractor's predicted vibration levels. This will also allow the contractor to adjust their plan accordingly if vibrations exceed predicted levels.

- The blasting contractor will monitor each blast's vibrations to ensure compliance with the project's vibration criteria

- Blasting will primarily be limited to the hours between 9:00 AM and 5:00 PM, Monday through Friday

Economy

Economic activity will be stimulated by construction of the Proposed Action. One effect will be the production of jobs in on- and off-site construction, trade, transportation, manufacturing, and services in support of construction. The earnings from these jobs will in turn generate personal expenditures (by project related workers) that will stimulate the local and regional economy. Expenditures will also encompass materials used in construction. The economic impacts noted below are based on a construction period of 118 weeks.

Jobs and Earnings: Based on a construction cost estimate of $110M (per NIC) and a total cost estimate (including soft costs) of $150M, the Proposed Action would be anticipated to create 361 on-site construction jobs, 652 other construction-industry related jobs (manufacturing, trade, transportation and related services), and 471 indirectly-related jobs, for a total of 1,484 jobs associated with the construction period. Of these jobs, 586 to 641 (including the 361 on-site jobs) would be expected to be Connecticut based. Gross total salaries and wages (earnings) arising from the Connecticut jobs are estimated at nearly $40M per year in direct earnings and $19.3M in indirect earnings, for a total of $57.3M per year.

Expenditures and Output: Net disposable expenditure projections based on jobs earnings shown above will aggregate approximately $31.5M per year. Of this amount, about 40 percent, or $12.7M, will be spent on retail goods and $18.8M on other types of consumption. Assuming 40 percent of this expenditure takes place in Connecticut, the impact would be $12.6M per year. Building materials associated with construction hard costs will total $62M according to NIC estimates. Assuming within-region purchases average the typical 25 percent of the total, $15.5M will be spent regionally for construction materials, corresponding to an annual impact of $6.8M.

Based on the anticipated total investment of $150M in the *Town Square* development, annual direct output is estimated at $66.1M and total construction related output at $188.2M.

Mitigation: Since construction-related impacts to the economy are positive, no mitigation is proposed.

Solid Waste and Hazardous Materials

Solid Waste: The primary initial impact to the solid waste system will be the generation of approximately 5,000 tons of demolition debris from the demolition and renovation of the retail and office facilities. Approximately two thirds of the existing steel structure and concrete flooring of the existing HCC will be retained and reused. The majority of the subterranean concrete garage will also be retained and reused.

Virtually inert demolition debris (natural soil, rock, brick, ceramics, concrete, and asphalt paving fragments) that poses neither a fire threat nor a pollution treat to ground or surface water can be classified as clean fill, which is exempt from solid waste regulations. Most of the remaining demolition material (including concrete, wood, brick, plaster, roofing materials, wallboard, metals, carpeting, insulation) is classified by DEP as bulky waste. Furnishings and carpet removed during renovation and demolition would be classified as oversized municipal solid waste. Materials containing asbestos and LBP will be handled separately, as described below

Waste will also be generated from construction (e.g., pallets, wood scraps, wallboard, siding and roofing scraps, packaging, dry latex paint residue, foam padding, insulation). This waste is classified and will be disposed of as municipal solid waste. Construction waste materials containing solvents (e.g., paint thinner, varnishes) will have to be managed as hazardous waste.

Hazardous Materials: There is a potential for release or discovery of hazardous materials during the demolition and renovation of existing facilities. Materials of primary concern are ACM, LBP, and mercury and lead containing equipment. Contaminated soils may be encountered during excavation or drilling of piers. Based on the Phase I site assessment, transformer sump concrete surfaces will need to be tested for PCBs.

Mitigation: In general, it is recommended that all demolition debris materials be segregated and testing on debris of concern be conducted. Based on this separation of different waste streams the following mitigation will be conducted.

- Solid Waste: Recommend that waste management specifications be written into the construction contract documents for the reuse of clean fill, as well as the resale, reuse, or recycling of demolition material and construction materials.

- Asbestos Containing Materials: As required by EPA National Emission Standard for Hazardous Air Pollutants regulations, regulated asbestos containing materials (RACM) will be removed from the HCC mall and existing parking garage prior to any renovation or demolition that would break up, dislodge, or similarly disturb the material or preclude the access to the material for subsequent removal. All identified ACM will be treated as RACM and disposed of as a special waste. If there will be more than three linear feet or three square feet of ACM, abatement will be performed by a licensed asbestos abatement contractor. Any removal of ACM from the buildings will proceed in accordance with Connecticut Department of Public Health (DPH), EPA, and OSHA regulations.

- Lead-Based Paint*:* Much of the LBP at the existing HCC is found on structural beams. The presence of LBP on structural beams may require abatement prior to welding or cutting (TRC, 2000). If the structural steel painted with LBP is combined with other demolition debris, the entire waste stream of demolition material will be evaluated for lead content. If the steel is segregated from the rest of the demolition debris, only the steel will be evaluated for lead prior to disposal. (Recycled or re-used steel is exempt from testing.) If demolition material coated with LBP is found to contain more than 100 milligrams per kilogram (mg/kg) of lead, it will be transported and disposed of as hazardous waste.

  Any LBP removed from the substrate will be tested for determination of hazardous waste lead using the toxicity characteristic leaching procedure and characterized for the presence of listed solvents used in the removal process. If the material contains lead at a concentration equal to or greater than 5.0 milligrams per liter (mg/L), the waste materials will be managed and disposed of as a hazardous waste per DEP regulations.

  Renovation/demolition activities associated with LBP will be performed using lead-safe work practices, and workers will be trained at a minimum according to the OSHA lead standard (29 CFR 1910.1025 and 1926.62). Abatement will be performed by a licensed contractor and/or contractor with the required OSHA training.. Asbestos abatement will be performed with proper engineering controls.

- Freon: Freon will be removed from air conditioning equipment and properly contained, labeled, transported, and disposed prior to dismantling. Workers removing Freon from air conditioning equipment will be certified in the proper use of chlorofluorocarbon recovery and recycling equipment.

- PCBs: If the transformer room and sump area are demolished, the concrete surfaces in the sump area will be tested for PCBs prior to or during demolition. Identified PCB contaminated waste materials from both the transformer room and sump area will be properly handled and disposed of.

- Universal Waste: Universal Waste will be properly contained, labeled, transported, and managed in accordance with Section 22a-449(c)-113 of the RCSA. It will be segregated from the demolition debris waste stream and recycled.

- Soils: It is recommended that soils excavated or recovered from drilled piers be tested and if contaminated hazardous soils are identified, be properly contained, transported, and disposed.

Public Utilities and Services

During construction, the installation, removal, and upgrade of utility supply systems has the potential to disrupt local service for temporary periods. In addition, construction activities

associated with the Proposed Action have potential to impact stormwater runoff quality by increasing erosion, turbidity, and sediment transport, particularly of fine-grained sediments from excavation or demolition activities.

Mitigation:

- All proposed connections to the existing water, sewer, and storm sewer system will be coordinated with and approved by the MDC prior to construction.

- Appropriate erosion and sedimentation controls will be incorporated into contract specifications and will be employed.

3.22 CUMULATIVE IMPACTS

The Proposed Action will contribute to both adverse and beneficial cumulative impacts, in association with traffic, land use, socio-economics/demographics/housing, economy, and solid waste, and energy. These are described below.

Traffic and Parking

Incremental increases in traffic over time, combined with the net increase in site-generated traffic, are expected to slightly degrade traffic operations at certain study intersections without any improvements. These impacts are anticipated to occur at certain study intersections within the local street network. The Proposed Action is not anticipated to have any adverse cumulative impacts on parking, transit service and operations, or pedestrian and bicycle facilities.

Land Use

The Proposed Action is one of a number of planned development projects targeted for Downtown Hartford, that will collectively support and enhance desired Downtown land use patterns and stimulate in-fill and adaptive reuse of underutilized properties. Consequently, the Proposed Action will have a beneficial cumulative impact on land use in the project study area and Downtown Hartford in general.

Socio-economics, Demographics, and Housing Conditions

A number of commercial, cultural, entertainment, and residential projects are planned for Downtown Hartford. The Proposed Action in association with these planned and programmed projects can be anticipated to have a beneficial cumulative effect on socio-economic, housing, and neighborhood conditions in the project study area. The combined impact of these projects is expected to strengthen the sense of place for the Downtown, create a 24-hour-a-day residential environment, encourage growth in businesses that will serve basic consumer needs (such as groceries and pharmacies), and expand employment opportunities.

Economy

The Proposed Action in association with the planned and programmed projects noted above can be anticipated to have a beneficial cumulative impact on economic conditions in the City of Hartford. The combined impact of these projects is expected to increase the resident population, jobs, and number of tourists visiting the City. This will increase spending at commercial outlets, encourage growth and stability in Downtown businesses, and expand employment.

Solid Waste

The Proposed Action in association with the planned and programmed projects noted above can be anticipated to collectively increase the volume of solid waste generated in the City of Hartford over time. The increased waste stream will result from the increase in resident population as well as growth in business activity, projected growth in tourism, and projected growth in attendance at cultural and sporting events in the region.

Energy

The Proposed Action in association with the planned and programmed projects noted earlier can be anticipated to collectively represent an increase in energy demand in the City of Hartford over time. The increased energy demand will result from the anticipated change in Hartford to a 24-hour a day urban community with new resident populations as well as growth in business activity, projected growth in tourism, and projected growth in attendance at cultural and sporting events in the region.

3.23 UNAVOIDABLE ADVERSE IMPACTS

The unavoidable adverse impacts from the Proposed Action tend to be those that accompany almost any development project that intensifies a land use, no matter how consistent with local or regional plans: increased traffic; increased use of energy and utilities; increased generation of solid waste; and construction-related inconveniences. With the exception of construction-related impacts, these effects go hand-in-hand with the provision of services people have come to expect of a quality lifestyle. In the specific case of the Proposed Action, the increased intensity of use of the HCC site, both for commercial and residential use, is a primary purpose of the project such that the project purpose and need would not be fulfilled without it. The Proposed Action includes mitigation measures to offset the anticipated impacts and to provide for long-term conservation measures, but it will not be possible to totally eradicate these effects. As reflected by the project purpose, the returns expected include a more vibrant sense of place in Downtown Hartford, a broader range of housing options, and a boost to economic conditions both in Hartford and the Greater Hartford region.

3.24 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The irreversible commitment of resources is generally defined as resources that, once committed to a project, would continue to be committed for such purposes throughout its lifespan. The irretrievable commitment of resources is generally defined as resources consumed or permanently impacted during project construction and operation that cannot be retrieved or replaced. Irreversible and irretrievable resources that would be committed to the Proposed Action include energy, construction materials, human labor, and finances. Energy will be consumed in project construction and the *Town Square d*evelopment will require more energy to operate than the existing HCC. A variety of natural, synthetic, and processed construction materials will be utilized to construct the Proposed Action. The dedication of human labor to the construction and operational phases of the Proposed Action represents an irretrievable expenditure of time and money. Finally, the expenditures required represent funds that, once committed, are no longer available for other purposes and once spent, cannot be regained.

3.25 MITIGATION MEASURES

The adverse impacts of the Proposed Action are anticipated to be minor and can be mitigated. The following table summarizes the proposed mitigation measures per resource category. Where no mitigation is proposed, the impact evaluations have determined that adverse impacts are minor and do not warrant mitigation, that no adverse impacts were identified, or that anticipated impacts will be beneficial.

Table 16: Proposed Mitigation for the HCC Redevelopment

Resource	Mitigation
Land Acquisitions and Displacements	• NIC will coordinate with existing retail occupants to mitigate the adverse effects of displacement.
Land Use and Zoning	None
Traffic and Parking	• NIC will develop and implement traffic and circulation management plan for the construction period. • NIC will coordinate with the City of Hartford to develop an alternative parking plan to assist users of the existing HCC garage to locate alternate parking during closures due to construction. • Recommend the City address traffic impacts.
Air Quality	• Recommend natural gas based fuel for the new emergency generator, if practicable • Diesel powered non-road construction equipment with engine horsepower ratings of 60 or higher, that are on the project for 30 days or more, will be equipped with Retrofit Emission Control Devices and/or Clean Fuels (except for cranes) • Compliance monitoring of diesel powered equipment for air quality will be conducted and subject to an agreement between NIC and DECD • Construction equipment will be required to comply with all pertinent state and federal regulations relative to exhaust emission controls and safety

Table 16 Contd.

Resource	Mitigation
Noise	• Erection of temporary barriers around the work site where deemed effective. • Installation and maintenance of properly functioning muffler devices on all construction equipment. • Adherence to City of Hartford noise ordinances. • Test blasting will be used to ensure compliance with predicted vibration levels. • Each blast will be monitored for vibrations to ensure the project's vibration criteria. • Blasting will primarily be limited to occur between 9 AM to 5 PM Monday through Friday.
Socioeconomics, Demographics, Housing	None
Economy	• NIC will coordinate with existing retail occupants to mitigate adverse affects of displacements
Water Quality	• See Public Utilities and Services
Hydrology and Floodplains	None
Wetlands	None
Flora Fauna and Habitats	• NIC will provide a site and box for the location of a peregrine falcon nesting box in consultation with DEP
Soils and Geology	None
Historic and Archeological Resources	• Coordination with SHPO to maximize compatibility of new buildings with surrounding National Register properties and districts.
Solid Waste/Hazardous Materials	• Solid waste management plan proposes practices to reduce solid waste generation. • Construction specifications will specify proper containment, transport, handling, and disposal of all wastes per state and federal laws. • Recommend testing and segregation of demolition debris into separate waste streams, including universal waste. • Abatement of ACM and LBP as necessary prior to demolition. All identified ACM will be treated as RACM; LBP will be tested for hazardous content and disposed of accordingly. • Sump area concrete surfaces will be tested for PCBs if they are to be demolished. If transformer room and/or sump area are demolished, all demolition waste with PCBs will be properly handled/disposed of. • Freon will be removed from air conditioning equipment and properly contained, labeled, transported, and disposed of prior to dismantling. • Recommend that soils excavated or recovered from drilled piers will be tested for contamination and managed accordingly. • Construction specifications will specify proper containment, transport, handling, and disposal of all wastes per state and federal laws.
Use of Toxic/Hazardous Materials	None
Aesthetics	None
Energy use and Conservation	• Design and completion of the Proposed Action will include a variety of new technologies in lighting, appliances and other items to conserve power.

Table 16 Contd.

Resource	Mitigation
Public Utilities and Services	• All proposed connections to the existing water, sewer, and storm sewer system will be coordinated with the MDC prior to construction. • New interior parking garage drainage system will incorporate an oil/grit separator, which will discharge into the sanitary sewer system. • Relatively clean roof drainage will be segregated from the more polluted parking area drainage and discharged to the stormwater system. • Appropriate erosion and sedimentation controls will be incorporated into contract specifications and will be employed.
Public Health and Safety	• A rodent survey will be conducted and, if warranted, an extermination plan will be developed before demolition activities commence.

3.26 COST-BENEFIT ANALYSIS

The analysis of costs and benefits for the Proposed Action includes the costs of construction and ongoing operations for *Town Square* compared to the benefits derived from income generated by the development and enhanced quality of life for Hartford's Downtown. This cost-benefit analysis is based on the sum of findings of the impact analysis conducted for this EIE.

Costs

Town Square is estimated to have direct construction costs totaling $110M (construction materials). The total project budget including soft costs will be $150M. Soft costs are those incurred during the construction period for on-site and off-site activity including on- and off-site construction jobs, and trade, transportation, manufacturing and services in support of construction. These jobs will in turn generate earnings (wages and salaries). From earnings flow personal expenditures (or costs), which extend the income earned by project related workers into the local and regional economy.

Based on the developer's projected investment of $150M in the *Town Square* project, it is anticipated that the annual direct output will be $66.1M based on a 118-week construction time frame (time frame estimate by NIC). Total annual output is estimated to aggregate $188.2M.

Once *Town Square* is operational, its costs will be largely a function of the operations of jobs created by its business tenants. Annual total gross direct earnings arising from employment at *Town Square* are projected at $13.4M. Business operations at Tower Square will generate an estimated $31.6M in direct annual output and $90M in total output.

Benefits

Benefits of the Proposed Action will include jobs created by the development, expenditures by residents in the local economy, and the indirect benefits to revitalization of Hartford's Downtown neighborhood.

It is estimated that 421 direct FTE jobs will be generated by the Proposed Action including 140 retail jobs, 279 office jobs, and two garage operations jobs. Indirect retail jobs will include 53 originating from Town Square's apartment residents consumption/expenditure in Hartford and the region. Presently the HCC mall has 66,179 SF leased and operational, which translates into 165 FTE jobs. The *Town Square* redevelopment will provide an increase of 256 jobs.

The economic impact analysis does not include the residential component of the development in direct calculations of earnings on the assumption that the employed residents will go to jobs based elsewhere in Hartford and the region. However, residents' projected consumption of goods and services is factored into the calculation of employment impacts, based on the fact that retail and service jobs will be created in the area based on the new *Town Square*-based demand source.

Annual total gross direct earnings arising from employment at Town Square are projected at $13.4M. Much of the spending associated with these earnings is expected to occur locally. Net disposable expenditure projections based on direct earnings will aggregate $11.1M. Of this amount, it is anticipated that 40.3 percent or $4.5M will be spent on retail goods and $6.6M on other types of consumption.

In addition to the quantifiable benefits of added jobs and consumer spending in Hartford's Downtown due to the Proposed Action, there will be less tangible benefits to quality of life. The Proposed Action is expected to have both a direct and indirect beneficial impact on housing options, aesthetics, and neighborhood cohesion. The *Town Square* will offer 262 new residential units. The presence of new neighborhood residents and associated economic activity will strengthen the neighborhood economic base and enhance the perception of neighborhood quality of life. The proposed streetscape improvements will enhance neighborhood access, aesthetics, and safety. All of these factors can lead to an enhanced sense of neighborhood cohesion.

An added factor is the number of other commercial, cultural, entertainment, and residential projects are planned for Downtown Hartford. The Proposed Action in association with these planned and programmed projects is anticipated to strengthen the sense of place for the Downtown, create a 24-hour-a-day residential environment, encourage growth in businesses that will serve basic consumer needs (such as groceries and pharmacies), and expand employment opportunities for Hartford residents.

4 LIST OF POTENTIAL CERTIFICATES, PERMITS, APPROVALS

The following certificates, permits, and approvals are anticipated to be required for the Proposed Action.

- DEP - Discharge of Domestic Sewage Permit
- DEP - Discharge of Minor Non-Contact Cooling Water
- DEP - Discharge of Swimming Pool Wastewater
- DEP - Miscellaneous Discharges of Sewer Compatible Wastewater
- DEP - Wastewater Discharge
- DEP - Special Waste Authorization
- DEP - New Source Review
- DPH - Asbestos Abatement Notification
- City of Hartford - Building Demolition Permit
- City of Hartford - Fire Marshall Blasting Plan Approval

5 COORDINATION PROCESS

The coordination process for this EIE has included a public scoping process and ongoing agency coordination. The DECD first initiated a Stage 1 Agency Project Review of the Proposed Action in July of 1999 to solicit early comments from various state agencies. As the project evolved, DECD implemented project scoping to further solicit comments from state agency reviewers and other interested parties. DECD then started the public scoping process under CEPA by issuing a Scoping Notice in Connecticut's *Environmental Monitor* on June 3, 2003 and conducting a Public Scoping Meeting on June 16, 2003 to further solicit comments from state agency reviewers and other interested parties. The Public Scoping Meeting was noticed in the *Environmental Monitor* on June 17, 2003 and in the *Hartford Courant* on June 18, 2003. A copy of the public scoping notices and responses from the Stage 1 Agency Project Reviews and formal public scoping are included in Appendix A.

6 CONCLUSION

The Proposed Action will provide the benefits of a revitalized and economically viable development at the Hartford Civic Center site. The project is crucial to the success of the Six Pillars program, the overall revitalization strategy for Downtown Hartford, and the economy of the City of Hartford as a whole. Expected adverse impacts include potential minor increases in traffic on local streets, displacement of some current HCC mall tenants, increases in solid waste and energy demand, and construction related impacts. However, there are no outstanding significant impacts as a result of the Proposed Action, since impacts have been avoided and minimized through project design, and, where appropriate, will be mitigated through specific mitigation measures.

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